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ABSTRACT

Based on a sample of 12 representative school boards in Ontario, a normative method of analysis was utilized in addressing the major concerns of the study: the appropriate number of noncertified staff for a given school board, future demand for and supply of noncertified staff, and the resultant implications of such information. The study concludes that current staffing patterns in Ontario are reasonable, reflecting a growing equalization of services among boards. The researchers project a decline in demand for noncertified staff that is proportionate to the decline in enrollment but argue that noncertified staff form an important part of the school community and should be retained where possible, as an alternative to contracting out for services. Recommendations include that the weighting factor for declining enrollments be reintroduced, that changes in the grant allocation formula be announced one year in advance, that revenue wealth be distributed according to need, and that agreements with noncertified staff be negotiated on a regional basis and include pension benefits for part-time employees. (Author/WD)

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WORKING PAPER NO. 10

THE IMPACT OF DECLINING SCHOOL ENROLMENTS ON NON-CERTIFICATED STAFF IN ONTARIO

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GWYNETH M. BOODOO

APRIL, 1978

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THE IMPACT OF DECLINING SCHOOL ENROLMENTS ON NON-CERTIFICATED STAFF IN ONTARIO

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CHAPTER I

SCOPE AND DESIGN

INTRODUCTION

As part of its investigation into the effects of declining enrolments, the Commission on Declining School Enrolments in Ontario (CODE), also known as the Jackson Commission, funded this study to determine the effects of declining enrolments on non-certificated (i.e., non-teaching) staff. Other, complementary studies, were commissioned on such topics as the effects of declining enrolments on supervisory officials, school principals, school curriculum, etc. Taken together, these studies should provide a comprehensive picture of the problems Ontario's educational community will have to face in the coming decade.

SCOPE

The scope of the present study had the following five parts:

1. Development of a uniform categorization scheme for staff in positions not requiring teacher certification in Ontario school boards.
2. Description of trends for the employment of non-certificated staff over the past ten years.
3. Projection of future trends in employment of non-certificated staff for the next ten years.
4. Assessment of the effect in a given board of the following factors on trends in employment of non-certificated staff, both past and future:
    a) numbers of students,
    b) numbers of certificated staff,
    c) numbers of schools,

    d) numbers of families of schools,
    e) language of instruction,
    f) conditions of employment,
    g) age distribution of staff,
    h) staff turnover, and
    i) staffing patterns.

5. Impact of retrenchment on non-certificated staff:
    a) job opportunities for different categories of staff
    b) pension losses by staff, and
    c) re-training opportunities and likely effectiveness.

These five objectives were kept firmly in view throughout the conduct of the research. However, as research progressed, the problem was recast into a somewhat different form.

THE PROBLEM

Underlying the questions in the scope of this contract is the assumption that, as in the case of teachers, the decline in enrolments will cause a reduction in the demand for non-certificated staff, and that this fall in demand will cause the displacement of staff. Further, there is an implication in this that there is some set of standards as to the numbers of both certificated and non-certificated staff that need to be employed in order to provide a quality of educational services acceptable to the community, and that this standard should not be exceeded for an indefinite length of time.

Given this interpretation of the scope of the study, the problem can be restated in terms of the following questions:

1. What are acceptable standards for the numbers of non-certificated staff employed by school boards of a give size and kind?
2. What will be the demand for non-certificated staff in the coming ten years, given that most school boards are becoming smaller?
3. What is the supply of non-certificated staff currently available in school boards, and how does this supply conform to future demand?
4. Given answers to the three questions above, what are the implications for the province, for school boards, and for individual employees?

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DEFINITION OF VARIABLES

Though most of the variables used in this investigation are so familiar that full definitions are unnecessary, in the interest of precision it is useful to specify certain details, such as the date of enrolment count and the manner of classifying both school boards and their employees.

School board enrolment is defined as the number of in-school students in grades K-13 for public boards and K-10 for separate boards as of September 30th for the academic year in question.

Rate of decline in enrolment for a school board is defined as the ratio of the decline in enrolment during a period of time to the original enrolment at the beginning of the time period. This term will be used interchangeably with "percentage decline." For the purposes of classifying school boards in terms of the rates of decline they have experienced to date, rates of decline were computed for the period from the peak enrolment in the elementary panel (K-10 for separate boards) to 1976. These rates were then placed into three categories: "low," $+\infty$ to -7.5%; "medium," -7.5% to -17.5%; and "high," -17.5% to -100%.

Size of school board is defined in terms of the total number of students enrolled in the year of peak enrolment. Boards were classified as "small," less than 10,000 students; "medium," 10,000 to 25,000 students; and "large," greater than 25,000 students.

School boards are classified as public or separate. In this study the term *public school board* will apply to those distinguished as boards of education, district area boards (public boards), protestant separate boards, boards operating in Department of Defence areas, and Hydro and other boards in the *Directory of School Boards 1977* (Ministry of Education, Ontario, 1977). The term *separate school board* will be used to include those listed as County or District Roman Catholic Separate or simply Roman Catholic Separate School boards in the *Directory*. Excluded from the study are boards operating in treatment centres and boards enrolling no students. In particular, the Metropolitan Toronto Board is not counted as a school board, whereas the public school boards in the City of Toronto and its five boroughs are.

The percentage of French or bilingual schools in a school board is the ratio of French or bilingual schools to the total number of schools, times 100. Boards are categorized according to the following divisions: "low," 0 to 5%; "medium," 6% to 20%; or "high," 21% to 100%.

The geographic *location of a board* is defined in terms of the municipal jurisdiction within which a board operates — city, county, or district. City boards include the six public boards in Metropolitan Toronto, boards of education in Windsor, Hamilton, London, and Ottawa, and separate school boards in Windsor, Metropolitan Toronto, and Ottawa. All boards operating in the Ministry of Education's Northwestern, Midnorthern, and Northeastern Regions are considered as district boards. Remaining boards are classified as county boards.

School board staff are defined as the entire group of individuals directly employed on a full- or part-time basis on December 31st of the academic year in question. Staff employed in positions requiring Ontario teacher certification are by definition *certificated staff*, and those in positions not requiring an Ontario teaching certificate are by definition *non-certificated staff*.

Just as the *staff* category was broken down into two separate categories, each of the two categories can be further disaggregated. Indeed, development of a uniform categorization scheme for non-certificated staff was the first task assigned in the contract for this study. We shall briefly recount the steps taken in responding to this matter.

Categorization of Non-Certificated Staff

Initially, it was unclear whether adequate data were readily available from sources in the Ministry of Education, or whether raw data would have to be collected. A number of potential sources of information were investigated, including the records maintained by school boards for personnel and financial purposes, and the Ministry of Education's data files based on *September School Reports* (which include data on the numbers of teaching staff attached to schools) and *June Board Reports* (which include data on the numbers of teaching staff attached to central office, supervisory officers, consultant staff, other professional staff, and educational support staff attached to central office).

A complete list of the staffing categories used in the September and June reports include the following positions (see Appendix A):

- Teachers attached to schools: all teachers and all principals, vice principals, heads of departments, and other non-teaching educational staff employed in the school.

- Teachers attached to central office: teachers, principals and vice-principals attached to central office.
- Supervisory Officers: Directors, Superintendents, Inspectors, etc. appointed under sections 244, 245, 246, and 248 of *The Education Act 1974* and Ontario Regulation 140/75.
- Consultant Staff: administrative assistants, supervisors, co-ordinators, program directors, and other qualified teachers employed in a similar capacity.
- Other Professional Staff: psychiatrists, psychologists, school social workers, speech therapists, speech pathologists, and attendance counsellors.
- Education Support Staff attached to schools: paid teacher aides, audio-visual, laboratory and educational resource technicians, and office staff attached to schools.
- Educational Support Staff attached to central office: paid teacher aides, audio visual, laboratory and educational resource technicians, and public information officers attached to central office.[1]

While data from the June and September reports might have sufficed, a second categorization scheme is also widely used within school boards; namely, the Ontario Ministry of Education's *Uniform Code of Accounts* (Ontario Ministry of Education, 1969). This categorization scheme is used to a greater or lesser degree by all Ontario boards to maintain their financial records. While its use is optional, annual financial reports to the Ministry must be made in a format derived from the *Code of Accounts*, so there is a strong incentive for its use.

The classifications used in the *Uniform Code of Accounts* are as follows:

Business Administration
- Senior Management Personnel
- Supervisory and Administrative
- Technical and Specialized
  - Architectural and Engineering
- Clerical and Technical
- Temporary Assistance

---

[1] Sources: *Enrolment and Staff Ratios, 1976* (Toronto: Ontario Ministry of Education, Information Systems and Record Branch, 1977); *June Board Report for 1977: Instructions* (Toronto: Ontario Ministry of Education, 1977).

- Computer Services
  - Supervisory and Administrative
  - Technical and Specialized
    - Computer operations
  - Clerical and Secretarial
  - Temporary Assistance
- Instruction
  - Instructional Administration
    - Senior Management Personnel
    - Supervisory and Administration
    - Clerical and Secretarial
  - School Office Administration
    - Clerical and Secretarial
    - Temporary Assistance
  - Day School Regular Courses
    - Instructional Personnel
      - Principals and Vice-Principals
      - Teachers
      - Other Instructional
  - Special Education
    - Instructional Personnel
      - Principals and Vice-Principals
      - Teachers
      - Others
- Educational Services
  - Audio-Visual
    - Supervisory and Administrative
    - Technical and Specialized
    - Clerical and Secretarial
  - Guidance and Counselling
    - Supervisory and Administrative
    - Technical and Specialized
    - Clerical and Secretarial
  - Library
    - Supervisory and Administrative
    - Technical and Specialized
    - Clerical and Secretarial

- Educational Services (Cont'd.)
    - Psychological
        - Supervisory and Administrative
        - Technical and Specialized
        - Clerical and Secretarial
- Attendance, Health, and Food Services
    - Attendance
        - Supervisory and Administrative
        - Technical and Specialized
        - Clerical and Secretarial
    - Health
        - Supervisory and Administrative
        - Technical and Specialized
        - Clerical and Secretarial
    - Food Services
        - Supervisory and Administrative
        - Technical and Specialized
        - Clerical and Secretarial
- Plant Operation
    - Supervisory and Administrative
    - Clerical and Secretarial
    - Temporary Assistance
- Plant Maintenance
    - Supervisory and Administrative
    - Clerical and Secretarial
    - Temporary Assistance
- Transportation
    - Supervisory and Administrative
    - Clerical and Secretarial
    - Temporary Assistance
    - Technical and Specialized
        - Home - School
        - Home - Ontario Schools for the Deaf or Blind
        - School - School
        - Other

A definition and budget code number for each of the categories above are included in Appendix B.

Given that two categorization schemes for school board employees had already been developed and were in use -- implying that the data were readily available -- it seemed reasonable to select one of them for use in this study. The third alternative, to develop a wholly new set of categories, appeared to be impracticable given the time available and the difficulties that would almost certainly arise were board personnel requested to provide both historical and current data on their staffs in a form unfamiliar to them.

Comparison of the categories used in the June and September *Board Reports* with those for the *Uniform Code of Accounts* shows the latter to be a finer classification scheme for non-certificated staff, having approximately 45 categories as opposed to 22 for the former. The factor accounting for this difference is the cross-classification of administrative, secretarial, and technical positions by functional responsibilities such as Educational Services, Transportation, etc. At the same time, some categories present in the *Board Reports*, such as research, are not included as a separate category in the *Uniform Code of Accounts*.

In the end, the *Uniform Code of Accounts* was selected as the basis for classifying both certificated and non-certificated staff. The deciding factors were its cross-classification of staff and its close linkage to the allocation of resources in school boards. It is used to indicate not only the category of staff but also the purposes for which funds are budgeted. This makes it possible to conduct financial as well as staffing analyses.

DESIGN OF THE STUDY

This investigation was carried out in four stages. First, a sample of 12 school boards was selected which to some degree was representative of the diversity of school boards in Ontario. Second, data were collected on students, certificated staff, and non-certificated staff in these boards, the latter using the uniform categorization scheme described in the previous section. Third, data were aggregated for analysis first at the provincial level and then at the board level. Finally analysis of data within school boards was undertaken. In the last instance, we have essentially 12 case studies.

A sample of 12 boards was selected for investigation on the basis of five classification variables. It was the intent of the researchers to maximize the differences among the boards in order that the effects of declining enrolments on non-certificated staff could be investigated in widely varying situations.

Classification Variables

The five classification variables were size, percentage decline in enrolment, the percentage of French schools in the boards, the type of board (public or separate) and the board's location (city, county, or district). The reasons for selecting these five classification variables bear notice.

The size of school board is a variable known to be related to the costs of operation. Small boards are forced to spread fixed costs for administration and operation across a relatively small number of students, while very large boards typically must increase the proportion of time and staff devoted to communication and coordination if they are to deal adequately with the extremely complex problems created by their large and diverse clientele.

Percentage decline is, of course, the major causal variable in the study. It was deemed necessary to select boards that had experienced enrolment declines of differing severity in order to assess the impact.

The percentage of French schools is included in order to facilitate the investigation of the special problems faced by boards which operate schools in two languages. For all practical purposes, boards with a large percentage of French schools must be considered as almost two separate boards since as enrolments fall schools cannot be consolidated as easily as in a uni-lingual board.

The public-separate distinction is important because separate and public schools face different sets of problems in terms of their ability to absorb decline. Separate schools, encompassing only grades K-10, can expect to feel the full impact of declining enrolments sooner. Also, they tend to have fewer employees to share the brunt of decline. On the other hand, the greater cost and complexity of secondary school operated by public boards mean that the ultimate impact of declining enrolments in the secondary panel will hit these boards particularly hard.

Finally, the regional impact of declining enrolments -- in cities, in counties, and in northern districts -- may vary considerably. As we shall see, there is evidence that declining enrolments may be particularly severe in cities and in northern districts.

Target Population

The target population from which the sample for this study was drawn consists of all the school boards in Ontario enrolling students, except for those in treatment centres. This population includes a total of 173 boards. Tables 1 through 4 provide a description of this population of school boards in terms of the classification variables discussed in the previous section.

The type of board -- public or Roman Catholic separate -- is used as a control variable so that the distribution of the two types of board can be compared. Note that two-thirds (116) of all boards are classed as public, and one-third (57) as separate.

Table 1 displays the number of boards in each size category; the majority of both public and separate boards are small. However, in comparison to separate school boards, a much higher percentage of public

TABLE 1
SIZE OF ONTARIO SCHOOL BOARDS

Size	Type					
	Public		Separate		Total	
	no.	%	no.	%	no.	%
Small (<10,000)	72	62%	44	77%	116	67%
Medium (10,000-25,000)	24	21%	10	17%	34	20%
Large (>25,000)	20	17%	3	5%	23	13%
Total	116	100%	57	99%	173	100%

boards are large. Together the 23 large school boards enrol a majority of Ontario's elementary and secondary students, though they comprise only 13% of all school boards.

The rates of decline in school enrolment that have been experienced in public and separate boards are reported in Table 2. To date, the impact of declining enrolments has been equally shared by both types of boards. Approximately one-half of all boards have experienced a low rate of decline, one-quarter a moderate rate of decline, and another one-quarter a high rate of decline. Given that enrolment projections reported elsewhere (e.g., Rideout, 1975) suggest that the province as a whole will experience an overall decline in school enrolment of approximately one-third from its peak, it is clear that the full impact of decline is yet to be felt.

TABLE 2

PERCENTAGE OF ENROLMENT DECLINE IN ONTARIO SCHOOL BOARDS
FROM PEAK YEAR TO 1976

Rate	Type					
	Public		Separate		Total	
	no.	%	no.	%	no.	%
Low (+ ∞ to -7.5%)	52	45%	26	46%	78	45%
Medium (-7.5% to -17.5%)	33	28%	16	28%	49	28%
High (-17.5% to -100%)	31	27%	15	26%	46	27%
Total	116	100%	57	100%	173	100%

The percentage of a board's schools which are French or bilingual is indicated in Table 3. Not surprisingly, the greatest numbers and percentages of boards with a large number of French or bilingual schools are separate school boards.

TABLE 3

PERCENTAGE OF FRENCH OR BILINGUAL SCHOOLS

Percentage of French and Bilingual Schools	Type				Total	
	Public		Separate			
	no.	%	no.	%	no.	%
Low (0 to 5%)	99	85%	27	47%	126	73%
Medium (6% to 20%)	10	9%	9	16%	19	11%
High (21% to 100%)	7	6%	21	37%	28	16%
Total	116	100%	57	100%	173	100%

Finally, Table 4 provides a breakdown of public and separate boards by location -- city, county, and district. The distributions are quite similar, although in comparison with separate boards, a slightly higher percentage of public boards are located in cities and districts, and a slightly lower percentage in counties.

TABLE 4

LOCATION OF SCHOOL BOARDS

Location	Type				Total	
	Public		Separate			
	no.	%	no.	%	no.	%
City	10	9%	3	5%	13	8%
County	45	39%	28	49%	73	42%
District	61	52%	26	46%	87	50%
Total	116	100%	57	100%	173	100%

Sample Selection

Twelve boards were selected from among the 173 boards in the target population after the latter had been classified according to the five variables identified in the previous section. This provided a sample which represents the diversity of boards in Ontario.

The selection of particular boards within strata was made in conjunction with colleagues involved in another CODE project who also required a sample of boards (Scott, *et al.*, 1978). The researchers' familiarity with the boards themselves and their directors was an important factor in selecting a board for the sample. While such an approach does not guarantee an unbiased sample as might random selection, it did ensure relatively easy access and good cooperation. The latter were deemed to take precedence given the time constraints under which the study was conducted.

The classification of the 12 boards on each of the five variables is given in Table 5.

In spite of the many compromises made in selecting the sample, it is nevertheless quite representative of the province. Table 6 compares the percentage distributions of the sample and the population of Ontario school boards on each of the classification variables. The percentages of public and separate boards in the population are identical to those in the sample. The percentages of boards that have experienced low, medium, or high rates of decline are virtually the same, as well. However, the sample does over-represent medium and large boards, boards with medium or high percentages of French or bilingual schools, and boards in cities and counties.

TABLE 5

CLASSIFICATION OF SAMPLE BOARDS AS TO SIZE, RATE OF CHANGE IN ENROLMENT, LANGUAGE, PUBLIC/SEPARATE, AND CITY/COUNTY/DISTRICT

Board	Classification Variable							
	Size (Peak Enrolment)		Decline in Enrolment (Peak Year to 1976)		French or Bilingual Schools		Public or Separate	City, County, or District
	Enrolment	Class.*	%	Class.†	%	Class.¶		
Board #1	106,169	Large	- 9.22	Medium	2.0	Low	Public	City
Board #2	24,000	Medium	- 6.29	Low	0.0	Low	Public	County
Board #3	17,736	Medium	- 9.31	Medium	0.0	Low	Public	District
Board #4	30,956	Large	-10.15	Medium	8.2	Medium	Public	District
Board #5	20,135	Medium	- 6.46	Low	0.0	Low	Public	County
Board #6	40,047	Large	-12.71	Medium	6.1	Medium	Public	County
Board #7	4,674	Small	-19.47	High	0.0	Low	Public	District
Board #8	17,759	Medium	- 6.54	Low	11.8	Medium	Public	County
Board #9	2,064	Small	-20.83	High	55.6	High	Separate	District
Board #10	23,927	Medium	- 6.72	Low	1.7	Low	Separate	County
Board #11	30,709	Large	-32.60	High	47.4	High	Separate	City
Board #12	5,615	Small	0.0	Low	5.6	Medium	Separate	County

*Size: Small = < 10,000; Medium = 10,000-25,000; Large = > 25,000. †Rate: Low = +∞ to -7.5%; Medium = -7.5% to -17.5%; High = -17.5% to -100%. ¶Language: Low = 0 to 5%; Medium = 6% to 20%; High = 21% to 100%.

TABLE 6

PERCENTAGE DISTRIBUTIONS OF THE POPULATION AND SAMPLE OF ONTARIO SCHOOL BOARDS ON FIVE CLASSIFICATION VARIABLES

Variable	Population	Sample
Size		
Small	67%	25%
Medium	20	42
Large	13	33
Rate of Decline		
Low	45%	42%
Medium	28	33
High	27	25
Percentage French School		
Low	73%	42%
Medium	11	33
High	16	25
Type		
Public	67%	67%
Separate	33	33
Location		
City	8%	17%
County	42	50
District	50	33

COLLECTION OF DATA

All quantitative data for this study were obtained from five sources; publications of the Ministry of Education, Ontario; publications of The Ontario Institute for Studies in Education; computer listings from the Ontario Municipal Employees Retirement Board (OMERS); computer analysis of questionnaire data from The Ontario Board of Examiners in Psychology; and data provided on code sheets by the twelve participating boards. In addition, some qualitative data were obtained from interviews with individuals representing the Canadian Union of Public Employees (CUPE) and the Ontario Psychological Association (OPA), from a questionnaire completed by officials in the twelve boards, and from copies of collective agreements submitted by the boards. The remainder of this section will note the sources of data for specific variables.

School board enrolments from 1969 to 1986 were requested from school boards (Appendix B). Historical data (1969 through 1976) were confirmed by comparing them with those in *Education Statistics Ontario* (Ministry of Education, annual). In three cases complete projections were not provided by boards. For Board #8 and Board #10, projections provided by Watson, *et al.* (1977) were used for the years 1977 to 1986. For Board #6, enrolment projections for 1977 to 1986 were obtained by halving the enrolment projections for the public schools in the region covered by the board made by Watson, *et al.* (1977). This procedure was not arbitrary; it was tested on historical data from 1969 to 1976 and was found to give very good estimates.

Information needed to classify school boards as to their type (public or separate) and location (city, county, or district) was obtained from the *Directory of School Boards 1977* (Ontario Ministry of Education, 1977). Data as to the number and hence percentage of French or bilingual schools were obtained from the *Directory of Education 1976/77* (Ontario Ministry of Education, 1977).

The numbers and salaries of all certificated and non-certificated staff for the year of peak enrolment and for 1976 were obtained directly from the 12 sample boards using a data collection instrument based on the personnel expenditure portions of the *Uniform Code of Accounts* (Ontario Department of Education, 1969). Personnel in boards were invited to indicate any modifications of the standard categories used in their boards

(Appendix C). The age and seniority distribution of non-certificated staff in the sample boards were obtained from the Ontario Municipal Employees Retirement Board in the form of computer output. The algorithms used to determine the age and service categories that were used is included as Appendix D. Rates of attrition due to retirement, disability, and mortality for these staff were obtained from Anthony, *et al.* (1976, pp. 84-86), (see Appendix E).

Qualitative data concerning the methods of allocating non-certificated staff, the existence of contractural agreements, the situation regarding attrition and lay-offs, and the perceived effects of the school grant formulas in the 12 sample boards were obtained on a questionnaire (Appendix F). Additional information was gained from copies of contracts which were submitted, as noted earlier.

Information about the numbers and interests of psychologists registered in Ontario were obtained from a statistical summary of data collected in a survey conducted by the Ontario Board of Examiners in Ontario in April of 1977.

Finally, several interviews were conducted with individuals representing CUPE, the OPA, and the Ministry of Education School Business and Finance Branch. The major purpose of these was to gain an understanding of the major policy implications that declining enrolments might have on members of CUPE and OPA, and on Ontario's system of school finance.

METHOD OF ANALYSIS

The analysis of the data has as its purpose the transformation of the raw data that were collected into meaningful answers to the four major questions to which this study is addressed: What is an appropriate number of non-certificated staff for a given school board? What will be the future demand for non-certificated staff? What will be the future supply of non-certificated staff? and What are the implications of the balance between this supply and demand?

Two methods of analysis might be used to determine an appropriate standard for the numbers of non-certificated staff in a school board. One approach would draw upon the traditions of scientific management, industrial engineering, and operations research. Each task in a school board's operations would be carefully analysed, time and motion studies would be conducted, and the most efficient method of carrying out the task would be determined. Based on this information, work loads would then be set, and positions staffed accordingly.

The alternative approach is one which is normative. For this type of assessment, current and past staffing practices would be analyzed to determine how individual boards have in fact been staffed. Appropriate statistics, such as the ratios of the numbers of non-certificated staff to certificated staff, non-certificated staff to students, and non-certificated staff to schools, would be computed to provide a measure of the resources committed in the form of non-certificated staff in support of each certificated staff member, each child, and each school. Finally, maximum and minimum values for the ratios might be determined for different types of boards in order to serve as guidelines for acceptable practice.

The second approach is taken here for several reasons. First, it is far less labourious than the first approach, which is best suited for increasing the efficiency within a given operation within a particular organization. Second, in the field of education, in which productivity and effectiveness are almost impossible to measure, the amount of resources of all types invested in the process of education the young reflects more a community's dedication to the task than it does the efficiency of operation. Given this view, the normative approach is the logical choice.

Projections for the demand for non-certificated staff for the next ten years were based on two assumptions: (1) that current ratios for non-certificated staff to students will be maintained, and (2) that enrolments will decline as projected by the boards in the sample. We believe that taken together these assumptions will result in realistic projections. While on the one hand, the tight financial position many boards are experiencing might encourage a greater rate of reduction in staff than the rate suggested by the decline in enrolments, the necessity of maintaining certain basic services regardless of the size of a school board would act as a countervailing force. In any case, the actual rate of decline in enrolments seems to be a base line against which the public measures reductions in staff, regardless of whether or not this standard is legitimate in an organizational sense.

The method of projecting the numbers of non-certificated staff is applicable not only to aggregate numbers but to all categories of staff. In many cases, fractions of positions result. For example, a position with a single incumbent in 1976 might require only .7 of a person in 1984.

The .7 figure implies that the job might become less than a full-time position, and be a candidate for combination with another position.

Supply of non-certificated staff for the coming 10 years was calculated in a very different way. For this OMERS data giving the age distribution of non-certificated staff in each of the sample boards as of December 1977 was taken to be the supply of non-certificated staff. That is, it was assumed that no hiring from outside the current cohort would occur. To estimate the supply as of December 31, 1978 and each successive year, the number of non-certificated staff were reduced by the number in the 55 to 65 year age group that would be expected to retire, incur a disability, die, or terminate employment in the intervening year.

The probabilities used for these calculations are those reported by Anthony, *et al.* in *Sick Leave Gratuities and Resultant Liabilities*, the so-called Wyatt Report (1976, pp. 84-87). The original probabilities are reported separately for males and females. Noting that non-certificated staff are equally distributed between the two sexes (Anthony, *et al.*, p. 42), the average of the two percentages was used in the calculations.

Our estimate of the supply of non-certificated staff are probably high since we have excluded termination of employment for those under 55 as a mode of reducing supply. Although non-certificated staff have traditionally had higher rates of termination, the current high rates of unemployment and reduced staff turnover in many organizations suggested that a very conservative treatment of terminations should be taken.

Finally, to determine the relationship between estimated future supply and demand for non-certificated staff, the ratio of the projected supply of staff in each year was divided by the projected enrolment. For 1977, this gives the current staff-student ratio. If this ratio drops in future years, a shortage of non-certificated staff is indicated, given the normative definition of demand in terms of current ratios. Conversely, an increase in the ratio implies that a surplus of non-certificated staff will be available. If voluntary resignations do not occur, it will then be necessary to either allow the staff-student ratio to increase, or to reduce the number of staff by mandatory lay offs.

The analyses for the supply of non-certificated staff and the relationship between supply and demand are done only at the aggregate level since the OMERS data did not include any information as to the categories of non-certificated staff. Given the tremendous variety of non-certificated staff positions -- cooks, psychologists, carpenters, computer system managers, etc. -- it is difficult to judge likely effect on any particular category given only the general picture. Nevertheless, questionnaire and interview data make it quite clear that the possibility of substantial reductions in force are perceived as a genuine threat to many non-certificated staff.

The method of analyzing the qualitative data collected for this study are not as systematic as those applied to the quantitative data. Instead, we looked for two themes in the data -- the nature of the threat to the job security of non-certificated staff, and the types of responses that are occuring in order to neutralize this threat. Conclusions drawn from this content analysis were then contrasted with the objective picture presented by the earlier projections and analyses.

OVERVIEW OF THE STUDY

This chapter introduced the problems being investigated, both in terms of their original statement in the contract and as they were reformulated. A number of housekeeping matters were taken care of — e.g., definition of variables and selection of sample -- and the planned mode of analysis was described.

In Chapter II supply and demand for non-certificated staff on a province-wide basis is described using aggregate data from the 10 sample boards.

Relationships among the various types of school boards, their staffing patterns and the rate of decline they are experiencing are explored in the first part of Chapter III. The latter part deals with the different balances between supply and demand in these boards.

The main focus in Chapter IV is the projected demand for various jobs within boards. Chapter V considers the effects of declining enrolments on employment opportunities to date.

Chapter VI analyzes the responses various groups of non-certificated staff have made or are likely to make in order to protect or moderate the effects of the decline in enrolments.

Chapter VII reviews the major findings of the study and sets forth a series of options that might be considered in order to accommodate the needs of both the public-at-large and non-certificated staff.

CHAPTER II

THE PROVINCIAL PERSPECTIVE

In this chapter, we provide an assessment of the effect of declining enrolments on non-certificated staff from a provincial perspective. To accomplish this, we first analyze staffing ratios in the sample boards and, after comparing them with figures for the province as a whole, draw conclusions as to the appropriateness of the current levels of staffing. Following this, estimates are made for the total supply and demand of non-certificated staff, and the chapter concludes with an assessment of the relationship between supply and demand.

RATIOS FOR NON-CERTIFICATED STAFF

In order to assess the appropriateness of the current ratios of non-certificated staff to certificated staff, students, and schools, data were collected from the sample boards for two different years — their year of peak enrolment and 1976. For both individual school boards and the total sample, ratios of non-certificated staff to certificated staff and to students were calculated. The percentage change in ratios was computed as well. To discover the source of changes in staffing ratios within boards, ratios of administrative, technical, clerical and secretarial, and other non-certificated staff were computed, as were those for the various functional areas.

Tables 7, 8, and 9 summarize the results for 10 of the 12 boards in the sample, two boards being omitted due to the lack of availability of data as to the number of staff in terms of full-time equivalents. Appendices G and H include a complete listing of all staffing ratios broken down by school board and elementary and secondary panels, where applicable.

TABLE 7

NON-CERTIFICATED STAFF PER 100 CERTIFICATED STAFF BY STAFF CLASSIFICATION

Board	Year	Non-Certificated Classification: NC Administration	Technical	Clerical/ Secretarial	Other/ Temporary	Total	Percentage Change
Board #1	1970	0.79	25.15	12.15	0.00	38.09	- 2.1
	1976	1.78	23.92	11.58	0.00	37.28	
Board #2	1969	0.98	16.34	8.21	0.00	25.53	21.6
	1976	1.17	20.16	9.72	0.00	31.05	
Board #3	1969	2.11	20.13	5.79	1.99	30.02	28.0
	1976	2.47	25.41	7.28	3.27	38.43	
Board #5	1971	2.32	16.60	7.56	0.15	26.63	- 2.7
	1976	1.81	14.46	9.53	0.10	25.90	
Board #6	1969	1.55	17.66	6.35	0.47	26.03	13.0
	1976	1.20	17.82	9.71	0.68	29.41	
Board #7	1970	2.22	10.72	7.76	0.00	20.70	33.5
	1976	1.32	16.67	9.65	0.00	27.64	
Board #9	1969	2.87	11.48	1.63	0.00	15.98	61.3
	1976	2.06	14.43	9.28	0.00	25.77	
Board #10	1971	1.53	15.06	6.06	0.00	22.65	28.7
	1976	1.65	16.27	11.23	0.00	29.15	

.....cont'd.

TABLE 7 (Cont'd.)

Board	Year	Non-Certificated Classification				Total	Percentage Change
		NC Administration	Technical	Clerical/ Secretarial	Other/ Temporary		
Board #11	1969	2.84	14.42	8.23	0.00	25.49	25.5
	1976	4.78	17.35	9.85	0.00	31.98	
Board #12	1974	0.90	14.83	8.06	0.00	23.79	- 3.9
	1976	1.13	14.18	7.56	0.00	22.87	
Averages	Year 1	1.87	16.24	7.18	0.26	25.55	17.3
	1976	1.94	18.07	9.54	0.41	29.96	
Ranges	Year 1	2.08	14.43	10.52	1.99	22.11	-29.6
	1976	3.65	10.96	4.30	3.27	15.56	

TABLE 8

NON-CERTIFICATED STAFF PER 100 PUPILS BY STAFF CLASSIFICATION

Board	Year	Non-Certificated Classification				Total	Percentage Change
		NC Administration	Technical	Clerical/ Secretarial	Other/ Temporary		
Board #1	1970	0.04	1.35	0.65	0.00	2.04	0.0
	1976	0.10	1.31	0.63	0.00	2.04	
Board #2	1969	0.04	0.70	0.35	0.00	1.09	46.8
	1976	0.06	1.04	0.50	0.00	1.60	
Board #3	1969	0.10	0.97	0.28	0.10	1.45	43.5
	1976	0.13	1.38	0.39	0.18	2.08	
Board #5	1971	0.11	0.80	0.37	0.01	1.29	7.8
	1976	0.10	0.77	0.51	0.01	1.39	
Board #6	1969	0.08	0.94	0.34	0.02	1.38	17.4
	1976	0.07	0.98	0.53	0.04	1.62	
Board #7	1970	0.13	0.64	0.46	0.00	1.23	35.8
	1976	0.08	1.01	0.58	0.00	1.67	
Board #9	1969	0.15	0.58	0.08	0.00	0.81	88.9
	1976	0.12	0.86	0.55	0.00	1.53	
Board #10	1971	0.07	0.67	0.27	0.00	1.01	46.5
	1976	0.08	0.83	0.57	0.00	1.48	

.....cont'd.

TABLE 8 (Cont'd.)

Board	Year	Non-Certificated Classification				Total	Percentage Change
		NC Administration	Technical	Clerical/ Secretarial	Other/ Temporary		
Board #11	1969	0.09	0.48	0.27	0.00	0.84	126.2
	1976	0.28	1.03	0.59	0.00	1.90	
Board #12	1974	0.04	0.65	0.35	0.00	1.04	3.9
	1976	0.05	0.67	0.36	0.00	1.08	
Averages	Year 1	0.09	0.78	0.34	0.01	1.22	34.4
	1976	0.11	0.99	0.52	0.02	1.64	
Ranges	Year 1	0.11	0.87	0.57	0.18	1.23	- 18.7
	1976	0.23	0.71	0.27	0.18	1.00	

TABLE 9

NON-CERTIFICATED STAFF, CERTIFICATED STAFF, AND PUPILS PER SCHOOL FOR 1976

Board	Non-Certificated Classification				Total		
	Administration	Technical	Secretarial	Temporary	Non-Certificated	Certificated	Pupils Per School
Board #1	0.47	6.38	3.09	0.00	9.94	26.7	487
Board #2	0.25	4.32	2.08	0.00	6.65	21.4	416
Board #3	0.48	4.92	1.41	0.63	7.44	19.4	365
Board #5	0.39	3.15	2.07	0.02	5.63	21.8	410
Board #6	0.23	3.45	1.88	0.13	5.69	19.4	353
Board #7	0.23	2.92	1.69	0.00	4.84	17.5	290
Board #9	0.22	1.56	1.00	0.00	2.78	10.8	182
Board #10	0.32	3.18	2.19	0.00	5.69	19.5	385
Board #11	0.78	2.82	1.60	0.00	5.20	16.2	273
Board #12	0.16	1.97	1.05	0.00	3.18	13.9	295
Averages	0.35	3.47	1.81	0.08	5.71	18.7	346
Ranges	0.62	4.82	2.09	0.63	7.16	15.9	305

Appendix I provides a description of data on staff collected from different sources, and notes the difficulty of ensuring that data from different boards are comparable.

Non-Certificated Staff to Certificated Staff Ratios

The unweighted average of non-certificated staff per 100 certificated staff in the 10 boards was 30.0 and the weighted average was 33.1. The latter figure is similar to the ratio of 35.5 that can be derived from the numbers of certificated and non-certificated staff in the province given by Anthony, *et al.* (1976). Therefore, it seems reasonable to conclude that our sample is fairly representative of the province's school boards.

Two trends are apparent in the ratio of non-certificated staff to certificated staff. First, there has been an overall increase of 17% in the ratio between the time boards experienced their peak enrolments in the elementary grades (which in most cases took place in 1969, 1970, or 1971) and 1976. This has meant an increase from 26 non-certificated staff for every 100 certificated staff in the average board to approximately 30, implying that there has been an increase in the proportion of the total school board staff devoted to ancillary services. Second, there has been a decrease of 30% in the range of staffing ratios, from 22 to 16. Initially, one board had a ratio of 38 non-certificated staff per 100 certificated staff while another had only 16. In 1976, the same two boards had 37 and 26 non-certificated staff per 100 certificated staff, respectively.

Taken together, these trends are quite revealing. Overall, standards have risen, but the rise has been the result of increases in the staffing ratios in boards previously having low ratios. These trends show the success of the government policies designed to equalize educational resources throughout the province and to limit educational expenditures.

The distribution of additional staff across job classifications during the past several years is instructive. A 33% increase has taken place in clerical and secretarial positions. The ratio for this category of staff has increased from 7.2 staff per 100 teachers to 9.5, on the average, while the range in ratios between boards has dropped from 10.5 to 4.3, or 59%.

The distribution across functional areas (Appendix H) is also of interest. The largest increase in ratios has been in educational services; i.e., the audio-visual, guidance and counseling, library, and psychological services. The ratio has increased 41% from 1.87 staff per 100 certificated teachers to 2.63. A large percentage increase has also taken place in computer services, which is up 33% from .23 to .31. However, the ratios for the four categories that account for the greatest proportion of non-certificated staff have changed less dramatically: business administration is down 1% from 2.88 to 2.86; plant operations is up 8% from 14.28 to 15.46; plant maintenance is down 1% from 2.99 to 2.97; and instruction is up 18% from 6.46 to 7.60.

The distribution of the increases in staff by classification and function provides insight into the most likely targets for cuts should staffing ratios be reduced appreciably from the current levels. The proportions of staff devoted to business administration, maintenance, and operation — which together employ two-thirds of all non-certificated staff — have remained quite stable through the years, suggesting that these areas have been relatively uninfluenced by the increases in funds that have become available. This probably means they will be relatively resistant to budget cuts, as well. On the other hand, educational services and instruction have expanded noticeably, and would probably be the first areas slated for reduction. Many of these cuts would probably be made in secretarial and clerical positions.

How appropriate are the norms that have developed for the ratio of non-certificated to certificated staff? We feel there is good evidence that existing ratios are reasonable. Increases have taken place primarily in those boards that were recognized as having inadequate services in the late 1960's, and few of these ratios have risen much above the current norm. Also most increases in funds have been devoted to improving staff ratios for educational services and instruction, not business administration and plant operation or maintenance. Though one of the boards once operated with ratios as low as 16 non-certificated staff for every 100 certificated staff, current standards would appear to demand a minimum of 25.

In contrast to the rise in ratios in boards with previously low ratios, the board that had the highest staff ratio has cut its ratio slightly. Given that this large board is saddled with many urban problems and faces a considerable decline in its enrolments, we are inclined to feel that a ratio of 37 non-certificated staff to 100 certificated staff is acceptable.

No doubt both of the minimum and maximum ratios we have identified as acceptable standards could be reduced slightly. A school will still operate if a library assistant, a psychologist, a secretary, or an audio-visual technician is lost. But this argument does not invalidate the claim that the ratios we have suggested as extreme values determine a range that is neither excessively generous nor excessively harsh. For all practical purposes, this means that the current range in non-certificated to certificated staff ratios is reasonable for both the present and the future.

Non-Certificated Staff to Pupil Ratios

The increasing trend noted for the ratio of non-certificated to certificated staff is also apparent in the ratio of non-certificated staff to pupils (see Table 8). On the average, this ratio has increased 34% from 1.22 to 1.64. Indeed, the increasing trend for this ratio is more pronounced than that for the other which had increased only 17%. A trend toward a convergence of the maximum and minimum values for the ratio is also apparent, the range having decreased 19% from 1.23 to 1.00.

Taken together, these trends show once more that the rise in average staffing ratios has been the result of the equalization of staffing ratios throughout the province, and not an increase in the staffing ratios in boards that already had relatively high ratios. In Board 1, for example, there was no increase, and, while it had led the sample in numbers of non-certificated staff per 100 pupils in 1970, its ratio was marginally exceeded by one northern board, Board 3, in 1976.

In contrasting the percentage increase in the number of non-certificated staff per 100 certificated staff with that per 100 pupils, a question does arise as to why the latter has experienced twice the increase of the former. The answer to this question is to be found in a simultaneous increase in the ratio of certificated staff to pupils, which has increased by 15% from 4.77 to 5.46 staff per 100 pupils. The 34% increase in the ratio of non-certificated staff to pupils is, in effect, the sum of the 15% increase in the ratio of certificated staff per pupil and the 17% increase in the ratio of non-certificated staff to certificated staff.

Are current ratios of non-certificated staff to pupils appropriate? The answer to this question devolves upon the question of whether or not the current ratio of certificated staff to students is appropriate, since we have already argued that current ratios of non-certificated staff to certificated staff are acceptable.

It is our opinion that present ratios are acceptable, and that it would be impossible to justify any cuts in teacher:pupil ratios given the circumstances most boards face. With an increasing number of small schools, it will be very hard or impossible for school boards to maintain the current quality of education without allowing an increase in the pupil:teacher ratio (Rideout, *et al.*, 1977; Rideout, *et al.*, 1975).

Based on the data at hand, it appears that non-certificated staff to student ratios ranging from 1.3 to 2.0 per 100 pupils define acceptable limits. A reasonable ratio for a given board would of course depend on its size, environment, and the problems it faces. The number of schools in a board, and the average size of these schools, place a major constraint on the level of efficiency which a given board can be expected to achieve.

Non-Certificated Staff to School Ratios

The well-documented relationship between cost-per-pupil and school size (Rideout, *et al.*, 1977) would seem to give considerable importance to the ratio of the number of certificated staff to the number of schools in a board (see Table 9). Presumably, a school board having, on the average, small schools would be expected to devote a relatively higher percentage of its resources to fixed costs such as maintenance, operation, and business administration.

To test this proposition, we calculated the rank-order correlation between the average school enrolment in a board and the ratio of non-certificated staff to pupils. A significant negative correlation would have confirmed the relationship. In fact, a correlation of only -.05 was found, which is not statistically significant.

The reason behind this negative result is probably the tremendous variation in staffing patterns within and between boards (Rideout, *et al.*, 1977, pp. 161-162), and the fact that most of the variation in staffing ratios is not due to the "fixed cost effect" that dominates when school enrolments drop below 200, but to the employment of varying numbers of support staff for educational services and instruction.

One might expect an exception to this situation in Board 9 which has an average school enrolment of only 182. This board has experienced the second highest decline in enrolment, the second highest rise in the number of non-certificated staff per pupil, and the highest increase in the number of non-certificated staff per certificated staff. In addition, it has the highest percentage of students in French or bilingual schools in the sample. Yet, its ratio of non-certificated staff to students, at 1.53, is below the sample average, though it has shown one of the largest percentage increases.

If all boards in Ontario were confronting the difficult situation faced by Board 9, the ratio of non-certificated staff to schools might become an important statistic. But at the present time, it is our feeling that it is not a particularly helpful ratio for analytic purposes. The other two ratios previously discussed in this chapter seem more interpretable since they show the direct relationship between the sizes of the three groups that combine to form our schools.

The ratio of non-certificated staff to schools may have a useful descriptive purpose, however. Along with the numbers of certificated staff and pupils, it helps to provide a profile of a typical school inclusive of its share of staff from the central office. As can be seen in Table 9, the typical school has 346 pupils, and benefits from the labour of 19 certificated staff and 6 non-certificated staff.

What will this profile of a typical school be six or seven years from now? Assuming current staffing ratios are maintained and that the enrolment declines by one-third, it would enrol only 242 pupils and require only 13 certificated staff and 4 non-certificated. This decline in the demand for staff is the topic of the next section.

DEMAND FOR NON-CERTIFICATED STAFF

In projecting the demand for non-certificated staff for the next 10 years, we have made several fundamental assumptions. First, we have assumed that demand is linked to the number of students in a school board, and that as the numbers of students decline, so will demand for staff. Second, we have assumed that the link between staff and enrolment is forged by the ratio of staff to students, and that current ratios for individual school boards will be maintained. We have taken this course, as we indicated earlier, because we felt that fiscal pressures to reduce staffing ratios will be counterbalanced by organizational and employee forces aimed at maintaining or increasing ratios, and that the rate of decline in enrolments would be the bench-mark against which the public would judge reductions in staff.

In this section, we shall first provide a description of overall enrolment trends based upon our sample data; second, projections for the demand for categories of non-certificated staff will be made; and finally, we shall discuss alternatives to the assumptions we have made, and how these alternatives might affect the projections.

Enrolment Trends

Past and projected enrolments for the combined sample of 12 school boards are listed in Table 10 and graphed in Figure 1. Enrolment in these boards peaked in 1970 at a total of 319,046 and has since declined 13% to an estimated 276,534 in 1977. The decline will continue steadily until 1986, at which time it will have declined by 35% in all.

Projections from 1982 and beyond deserve special comment. For those years the number of new students in kindergarten and the primary grades are yet to be born. Hence the projections, which tend to show a slackening in the rate of decline, are less reliable than those for other years. The elementary projections by boards of education and K-10 projections by separate school boards contained in Appendix B typically show flat lines or slight increases beyond 1982. Should these projections prove to be too high, then enrolments might well decline more than projected above, perhaps as much as 40% from their peaks.

Annual rates of change in school board enrolments are not quite as predictable as Table 10 and Figure 1 suggest. While the typical board may in fact expect a 4% decline in enrolment in each of the next five years, each board is unique. Historical data make this point particularly evident at the secondary level where enrolments seem to show one or two percentage points of random variation from one year to the next.

Projections of Demand for Staff

Ten-year projections were made for the total demand for non-certificated staff in the ten sample boards for which current data were available. Detailed estimates were also made within each of the boards for the demand for each kind of position (i.e., administrative, technical,

TABLE 10

ENROLMENT TRENDS FOR COMBINED SAMPLE

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TOTAL SAMPLE


NO. OF SCHOOLS   729
NO. OF FRENCH SCHOOLS    57
NO. OF BILINGUAL SCHOOLS     7

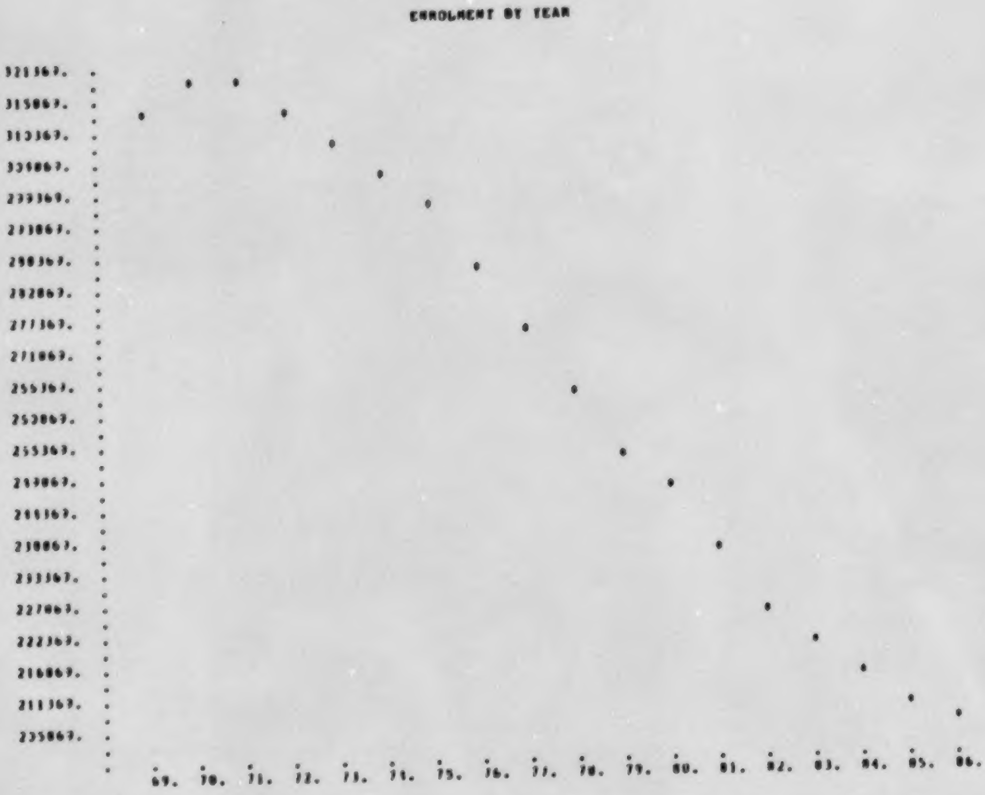

YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969    315195.
1970    319046.      3851.      1.22178
1971    317956.     -1090.     -0.34164
1972    314645.     -3311.     -1.04134
1973    306234.     -8411.     -2.67317
1974    299542.     -6692.     -2.18525
1975    295389.     -4153.     -1.38645
1976    287206.     -8183.     -2.77025
1977    276534.    -10672.     -3.71580
1978    265771.    -10763.     -3.89211
1979    255052.    -10719.     -4.03317
1980    244575.    -10477.     -4.10779
1981    235290.     -9285.     -3.79638
1982    225670.     -9620.     -4.08857
1983    218171.     -7499.     -3.32299
1984    212748.     -5423.     -2.48566
1985    208719.     -4029.     -1.89379
1986    205869.     -2850.     -1.36547
AVE. RATE OF CHANGE OVER LAST16YEAR/S  -2.69374%
```

FIGURE 1

GRAPH OF ENROLMENT TRENDS FOR COMBINED SAMPLE

RANGE 113177.   SIZE OF INTERVALS   5500.   NO. OF INTERVALS   21



secretarial and clerical, and other) and for each functional category. Sample data were extrapolated to give estimates of total demand for non-certificated staff in the province.

In 1976, the 10 boards in the sample employed a total of 4,360 non-certificated staff (Table 11). By 1981, only 3,572 non-certificated staff members will be required, indicating a net loss of 788 positions, and by 1986, only 3,126 staff members, suggesting the loss of an additional 446 positions.

On a provincial basis, there were an estimated 31,712 non-certificated staff employed in 1976. This figure was derived by multiplying the non-certificated to certificated staff ratio for the sample boards by the number of certificated staff reported by Anthony, *et al.* (1976, p. 40). There will be a demand for only 25,978 in 1981 and 22,731 in 1986, assuming as before that demand is tied to the decline in enrolment and the current staff to student ratios.

The distribution of staff across the various types of positions is displayed in Table 11. The demand in various functional areas are displayed in Table 12.

Detailed projections for demand for staff in each budget category for each board are given in Appendix J. These projections are tailored to each individual board in that the ratio of certificated staff to students for 1976 for each board is used to link the projected demand to the number of students. Similarly, the enrolment projections for the board in question are used, not those for the sample as a whole. Due to the considerable variation in expected rates of decline in enrolment, there is considerable variation in projected change in demand among boards. In one board there is a projected increase in demand, while others show losses up to 38%.

Alternative Assumptions and Projections

A number of alternative assumptions might be used in making projections for the future demand for non-certificated staff. With alternative assumptions, different projections would arise.

Our initial assumptions were that:

1. current non-certificated staff to student ratios are appropriate;
2. the numbers of staff will decline in direct proportion to the numbers of students; and
3. demand for staff will decline at the same time that enrolment declines.

TABLE 11

PROJECTED DEMAND FOR CERTIFICATED AND NON-CERTIFICATED STAFF IN TEN SAMPLE BOARDS BY TYPE OF POSITION

Type of Position	Full Time Equivalent Staff		
	1976	1981	1986
Non-Certificated			
Administration	255.8	209.6	183.4
Technical	2,692.9	2,206.0	1,930.3
Clerical/Secretarial	1,369.1	1,121.6	981.4
Temporary	42.5	34.8	30.5
Total	4,360.3	3,572.0	3,125.6
Certificated			
Administration	222.5	182.3	159.5
Teachers	12,963.4	10,619.6	9,292.2
Total	13,185.9	10,801.9	9,451.7

TABLE 12

PROJECTED DEMAND FOR NON-CERTIFICATED STAFF IN SAMPLE BOARDS BY FUNCTIONAL CATEGORY

Categories	Full-Time Equivalent Staff		
	1976	1981	1986
Business Administration			
Managerial/Supervisory	97.2	79.6	69.7
Other	280.1	229.5	200.8
Total	377.3	309.1	270.5
Computer Services	41.0	33.6	29.4
Education Services			
Audio-Visual	145.5	119.2	104.3
Guidance and Counselling	33.1	27.1	23.7
Library	36.8	30.1	26.4
Psychological	91.5	75.0	65.6
Other	39.9	32.7	28.6
Total	346.8	284.1	248.6
Attendance, Health & Food Services			
Attendance	28.0	22.9	20.1
Health	0.0	0.0	0.0
Food Services	17.2	14.1	12.3
Total	45.2	37.0	32.4
Plant Operation - Total	2,038.3	1,669.8	1,461.1
Plant Maintenance - Total	391.3	320.6	280.5
Transportation			
Administration	20.4	16.7	14.6
Home-School	98.2	80.4	70.4
Other	0.0	0.0	0.0
Total	118.6	97.1	85.0
Instruction			
Board Office	166.2	136.2	119.1
Schools	835.6	684.5	599.0
Total	1,001.8	820.7	718.1
Grand Total	4,360.3	3,572.0	3,125.5

The first alternative set of assumptions challenges the second and third of the above assumptions. It is proposed instead that:

2'. demand for non-certificated staff will decline only in proportion to the reduction in variable costs occurring as a result of the loss of students, while the demand represented by fixed costs will remain unchanged; and

3'. decline in demand will lag behind the decline in enrolment.

Assumption 2' implies that, while current staff to student ratios may be acceptable, they should be allowed to increase as enrolments fall since fixed costs will represent a greater proportion of total costs. This view has support in the literature. Rideout (1977, p. 133) reports:

> . . . that for total in-school cost, the breaking point (based on 100-pupil class intervals) is at 200 pupils. While schools with between 200 and 299 FTE pupils cost only 1 percent more than schools with 800 or more pupils, schools between 100 and 199 FTE pupils cost 10 to 20 percent more and schools with fewer than 100 FTE pupils cost 41 or 42 percent more than schools with more than 800 FTE pupils.

In addition, assumption 3' implies that the decline in demand, whether it be proportional or not, will not be felt immediately. According to the *Report of the Illinois Task Force on Declining Enrollments in the Public Schools* (Illinois State Office of Education, 1975, Appendix C), it may require five or six years before the savings due from a decrease in enrolment accrue to a school board. In the meantime, it must pay for the excess burden not covered by state aid out of local funds.

These two alternative assumptions -- that a given percentage decline in enrolment reduces demand for staff by some smaller percentage, and that this reduced demand lags several years behind the actual loss in enrolment — could be built into a set of alternative projections. The easiest way to do this might be simply to lag the projections one or two years behind the decline in enrolments until the decline stops. At this point in time, one could stop relating decline in demand to the preceding years' enrolments, but tie it to current enrolments at the then current staffing ratio. This ratio would be higher than 1976 ratios because of the lag. By making this difference permanent, one would be taking some account of the larger proportion of staff representing fixed costs.

The second alternative set of assumptions we consider would replace the first assumption above with the following; namely, that:

1''. current non-certificated staff to student ratios are excessively high and should be reduced.

The normative character of this assumption is obvious. If it is considered along with assumptions 1 and 2, it would lead to a projection of demand lower than that made here. How much lower would depend, of course, on the ratio selected. If considered in concert with assumptions 2' and 3', it would probably lead to projections very much like those we have made, since they represent countervailing forces.

The third and final alternative replaces all three assumptions. It could be assumed that:

4'''. the current total expenditure for elementary, separate, and secondary schools, which represent the amount society is currently willing to spend for these purposes, will continue unchanged regardless of the number of students.

This assumption would tie the demand for non-certificated staff not to enrolment, but to the effects increased costs and salaries have on board finances. That is, if there were no increases in costs and salaries, the demand for non-certificated staff would remain stable at current levels. On the other hand, if costs and salaries increased, then there would be a proportionate decline in demand as funds were channeled toward these purposes. Even this decline would not occur if funds were indexed to inflation.

There is much to be said for assumption 4''' in boards that are currently spending above the ceiling set by the province for recognized ordinary expenditure. These boards are already depending on the local property tax to raise a proportion of their funds above and beyond that portion tied to enrolments under the provincial grant plan. The local portion of their revenues may remain fixed, and represent a growing proportion of the boards' revenues. Even then, these funds would not isolate a board entirely from the effects of the provincial grant system which ties grants to enrolment.

There is less reason to believe that assumption 4''' would be valid for boards operating at or below grant ceilings. These boards, many of which do not have a substantial property tax base, will certainly feel the effects of declining enrolments on their revenues, unless the province were to make major changes in its grant system.

On balance, the assumption that the amount spent on education would have no relation to the numbers of students seems untenable. At the same time, it is recognized that the decline in revenue in some boards might be less than proportionate to the decline in numbers of students. For these boards, it would probably be valid to use lagged projections of the type that were described when we considered alternative assumptions 2' and 3'.

We have retained our original assumptions for our projections in spite of arguments that offer support for projections incorporating a time lag and recognition of fixed costs. The major reason for this is our opinion that the pressure to increase staffing ratios will be offset by the pressure to reduce them. However, for those interested in alternative projections, we would note that lagged projections of the type we have mentioned can be derived from those presented by simply renumbering the years.

SUPPLY AND DEMAND FOR NON-CERTIFICATED STAFF

The question of the relationship between the supply of labour of a given type and demand for that labour is usually considered from the broad perspective of a given labour market. But the situation that now confronts Ontario school boards requires a somewhat different approach. For this study, we define the supply of labour in terms of those currently employed in school boards. Using this definition, the relationship between supply and demand can be assessed by determining whether or not attrition will reduce the current cohort of non-certificated staff employed in Ontario's school boards at a rate less than, equal to, or greater than the decline in demand.

Since we have linked demand directly to enrolment and have assumed that staffing ratios should be maintained at current levels, the relative rates of decline for supply and demand can be measured by the staff to student ratios that would occur in the future assuming no new non-certificated staff were hired and no current staff members were laid off. Whenever the ratio is seen to drop below the current level, the decline in supply must be greater than the decline in demand. Conversely, when the ratio rises above the current level, the decline in supply must not be as great as the decline in demand. A constant ratio would, of course, imply that both supply and demand were declining at equal rates.

The data on the age and numbers of staff needed for this analysis were obtained from OMERS and included all current non-certificated staff who belonged to this retirement in the 12 sample boards. As explained more fully in Appendix I, a sizeable proportion of employees in some boards have not joined OMERS and as a result, staff to student ratios based on these data are smaller than those based on board data. However, these data can still suffice as long as we assume that the age distribution among OMERS members in boards is the same as that for those who are not members. Then, it becomes the relative rather than absolute values of the changes in ratios from year to year that are important.

To derive the projected number of non-certificated staff currently employed who will be available in the coming years, the rates of retirement, disability, death, and termination reported in Appendix E were applied. Since it was assumed that no terminations would take place for those under 55, the projected number of remaining staff are liberal estimates.

Table 13 reports the projected non-certificated staff to student ratios for the coming ten years for the twelve sample boards, assuming no replacements are hired. Note that the initial value for the ratio of 1.69 staff per 100 students probably underestimates the true ratio by about 10% due to discrepancies between board and OMERS data. The important matter, though, is the shape of the curve shown in Figure 2.

For the sample as a whole, it is evident that the supply of non-certificated staff currently employed in the 12 boards will decline more rapidly than will enrolment. The downward trend is rather slight at first, the ratio decreasing only 4% between 1977 and 1983. Thereafter, the drop is rather sudden, the ratio decreasing another 7% against the 1977 base in just three years. This implies that, on the average, the boards in the sample will be in a position to hire additional non-certificated staff in the coming years, assuming current staffing ratios are maintained.

The sudden drop in the ratio of non-certificated to certificated staff after 1983 warrants particular mention. As can be seen from Table 13, the actual number of non-certificated staff will decline by 24% between 1977 and 1983, but only 10% between 1983 and 1986. These decreases seem to run counter to the declines in the ratios of staff to students. The reason for this is the projected slowing in the rate of decline in enrolments. As noted earlier, enrolment projections for this

TABLE 13

SUPPLY/DEMAND FOR NON-CERTIFICATED STAFF IN COMBINED SAMPLE, 1977 TO 1986

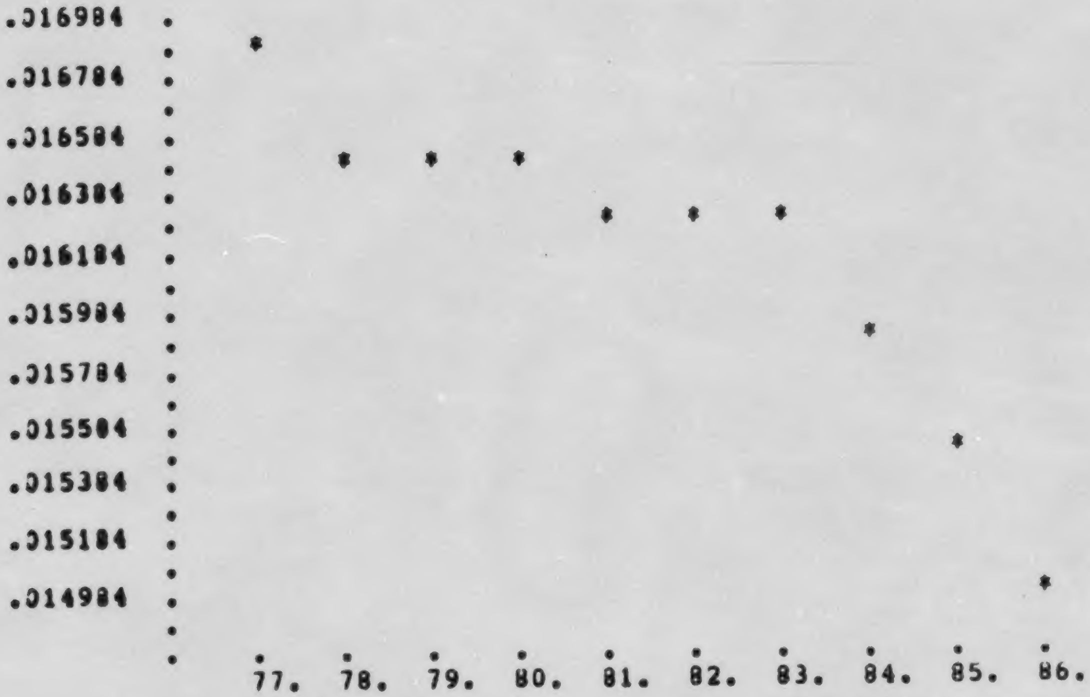
TOTAL SAMPLE

YEAR	NO OF NC STAFF-A	PROJECTED ENROLMENT-B	A/B
1977	4671.000	276534.	.016891
1978	4397.948	265771.	.016548
1979	4192.197	255052.	.016437
1980	4016.138	244575.	.016421
1981	3852.699	235290.	.016374
1982	3696.403	225670.	.016380
1983	3541.472	218171.	.016233
1984	3387.069	212748.	.015921
1985	3235.154	208719.	.015500
1986	3084.647	205869.	.014984

RANGE .001908 SIZE OF INTERVALS 0.0002 NO OF INTERVALS 10

FIGURE 2

SUPPLY/DEMAND FOR NON-CERTIFICATED STAFF IN COMBINED SAMPLE, 1977 TO 1986



period are subject to considerable uncertainty since the children who will be entering school then have yet to be born. If in fact the enrolment projections prove to be too high, then the increased demand for non-certificated staff after 1983 may not materialize.

The demand for additional non-certificated staff beyond those currently employed which is suggested by Table 13 and Figure 2 is probably an underestimate due to the conservative treatment of terminations. Traditionally, younger employees have a higher rate of resignation than do older employees, yet we have assumed this rate is zero. The fact that many employees in some boards are not members of OMERS may reflect this lack of long-term commitment.

On the other hand, should conditions mandate a decrease in staffing ratios, then our projections could of course overestimate demand and there could be a surplus of employees. Certainly individual boards will face this situation.

SUMMARY

In this chapter, we have argued from a normative perspective that current ratios of non-certificated staff to certificated staff and students are acceptable, and that the future demand for non-certificated staff will be tied directly to the decline in enrolment. We have shown for the sample in this study that there will be an opportunity for the average board to hire additional non-certificated staff in the coming years, but noted that individual boards may be faced with an excessive number of non-certificated employees. This type of variation among boards is one of the topics of the next chapter.

CHAPTER III

BOARD CHARACTERISTICS, STAFF RATIOS, AND SUPPLY AND DEMAND

The provincial overview presented in the preceding chapter conceals a tremendous variety of situations that Ontario's school boards face. This variation is evident in Table 5, which describes the characteristics of the 12 sample boards in terms of the five classification variables, and in the ranges in staffing ratios reported in Tables 7, 8, and 9. It is also present in the balance between the supply and demand for non-certificated staff, as we shall see.

The main purpose of this chapter is to explore this variation among boards in order to discover systematic relationships between the classification variables and the staffing ratios in boards. This information will provide a guide as to where a given board's staffing ratios might be expected to fall within the bounds previously identified. A second purpose is to learn if certain types of boards are perhaps more likely to face a surplus of non-certificated staff than are others.

In the analysis that follows, the limitations imposed by the small sample size are painfully evident. We explore the relationships between five different independent variables with a total of seven dependent variables — all with a sample size of 10. We have been forced to treat just one independent variable at a time, taking the effects of other variables into account only in heurisitc fashion.

CLASSIFICATION VARIABLES AND STAFFING RATIOS

There were five variables used to identify important traits of school boards which, for legal or organizational reasons, were felt to be of relevance in investigating the size of staffing ratios. These were the statute status of board (public or separate), the location of the board, the size of the board, the percentage of the board's schools which were French or bilingual, and of course the rate of decline in enrolment. In a sense, the first four of these might be considered background variables since the rate of enrolment decline is the independent variable of primary interest.

Statute Status

The distinction between public and separate boards is a major distinction among boards for many reasons. Of utmost importance as far as staffing patterns are concerned is the difference in grade levels served: K-13 in most public boards, and K-10 in most separate boards.

Table 14 presents the staffing ratios broken down according to the type of board. Included in the ratios are the ratio of non-certificated staff per 100 certificated staff and per 100 pupils, as well as the ratios of non-certificated staff, certificated staff, and pupils per school. Data on the first two ratios are presented both for the year in which enrolment decline commenced (denoted by "Year 1") and 1976, along with the percentage change between the two years.

In spite of the small sample sizes, there appear in Table 14 several notable features.

First, the non-certificated staffing ratios for separate boards are smaller than those for public boards; this is to be expected since the latter must operate many large secondary schools. In 1976, there were about 27 non-certificated staff per 100 certificated staff in the separate schools, and 32 in the public schools. Similarly, there were 1.50 non-certificated staff per 100 pupils in separate schools, and 1.73 in the public schools.

Second, it is apparent that the gap in staffing ratios between public and separate schools has closed considerably in recent years. In Year 1, the non-certificated to certificated staff ratio for public boards averaged 27% greater than that for separate boards, and the non-certificated staff to pupil ratio averaged 52% greater. In 1976, these percentage differences both had decreased to 15%. In lieu of other evidence, we would suggest that this 15% differential is acceptable.

Third, it is apparent that while the gap between staffing ratios for public and separate boards has been decreasing, the ratios in both types of boards have increased considerably. The rates have of course increased more rapidly in separate boards than public boards; it is this higher rate of increase that effected the reduction in the gap in staffing ratios.

TABLE 14

STAFF RATIOS BY PUBLIC/SEPARATE CLASSIFICATION

Ratio	Type of Board	
	Public (n = 6)	Separate (n = 4)
Non-certificated per 100 certificated		
Year 1	27.83	21.98
1976	31.62	27.44
Percentage change	13.6	24.9
Non-certificated per 100 pupils		
Year 1	1.41	0.93
1976	1.73	1.50
Percentage change	23.4	61.9
Per school for 1976		
Non-certificated	6.70	4.21
Certificated	21.03	15.10
Pupils	387	283

Finally, we note that the average public school is 37% larger than the average separate school. The variance is no doubt primarily attributable to the large secondary schools in public boards. Nevertheless, public boards will, on the average, have greater flexibility in maintaining schools of larger size as enrolments decline. In the future, after an expected enrolment decline of an additional 22%, the typical school in a public board will have 302 students, whereas the typical separate school will have only 221 students, dangerously close to the enrolment level of 200 which was identified earlier as a point at which costs can be expected to escalate disproportionately to the number of students. One can surmise that separate boards will have more schools in this category.

Location of Board

The relationship between a board's location in a city, county or district and the various staffing ratios are indicated in Table 15. Again, several trends are prominent.

The trends toward equalization of services apparent throughout this study are reflected once again in the non-certificated to certificated staffing ratios. Initially, the district boards had the lowest ratios, county boards were next, and city boards were highest. After rapid gains in district boards, the ratios for 1976 showed that district boards were on a par with county boards. City boards, though showing the smallest percentage increases, still had the highest ratios.

The data for non-certificated staff per 100 pupils are not so systematic. They indicate that while district and county boards were initially similar, the more rapid increases in the ratios in district boards have placed the latter second to city boards. As we shall see later, some of this increase in district board ratios is probably due to the presence of higher rates of declining enrolment in these boards (Table 5).

Finally, we note that the district boards generally operate schools that are smaller than those in county or city boards. As enrolments decline, the impact will be greater on these boards.

Size of Board

Table 16, not unlike the preceding two, shows the trend toward the equalization of staffing ratios, this time between small, medium, and large boards. Large boards retain the highest ratios, and small boards the lowest.

TABLE 15

STAFF RATIOS BY LOCATION OF BOARD

Ratio	Location		
	City (n = 2)	County (n = 5)	District (n = 3)
Non-certificated per 100 certificated			
Year 1	31.79	24.93	22.23
1976	34.63	27.68	30.61
Percentage change	8.9	11.1	37.7
Non-certificated per 100 pupils			
Year 1	1.44	1.16	1.16
1976	1.97	1.43	1.76
Percentage change	36.8	23.4	51.3
Per school for 1976			
Non-certificated	7.57	5.37	6.81
Certificated	21.50	19.20	15.90
Pupils	380	372	279

TABLE 16

STAFF RATIOS BY SIZE OF BOARD

Ratio	Size		
	Small (n = 3)	Medium (n = 4)	Large (n = 3)
Non-certificated per 100 certificated			
Year 1	20.16	26.21	29.87
1976	25.43	31.13	32.89
Percentage change	26.1	32.89	10.1
Non-certificated per 100 pupils			
Year 1	1.03	1.21	1.42
1976	1.43	1.64	1.85
Percentage change	39.0	35.3	30.5
Per school for 1976			
Non-certificated	3.60	6.35	6.94
Certificated	10.73	20.53	20.77
Pupils	256	394	371

The already small size of the average school in small boards, enrolling an average of just 256 pupils, leaves relatively little room for flexibility. Obviously, small boards can expect to feel the effects of declining enrolments more acutely than medium or large size boards.

French Schools

The percentage of French or bilingual schools is not as systematically related to staffing ratios as the previous variables, as can be seen in Table 17. Boards with the lowest and highest percentages of French schools have the highest staffing ratios. However, this pattern was not present at the time the decline in enrolments commenced. At that time, the boards with the highest percentage of French schools had the lowest ratios. The change in position was brought about by extremely rapid increases in ratios, especially that of staff to students.

The two boards with a high percentage of French schools have other features in common. Both are separate school boards which have experienced a high rate of decline in enrolments. This, combined with the small average school size, may in part explain the rapid changes in ratios.

Rate of Decline

The relationship between the declines in enrolment and in the demand for staff received considerable attention in the preceding chapter. Demand for staff in the coming ten years was linked directly to enrolment, with decline in demand occuring as enrolment declined. It was acknowledged, however, that others have described a time lag of several years after a given decline in enrolment before demand drops, and that even then the decline in demand may not be proportionate to the decline in enrolment due to the increasing share of costs that are fixed.

Table 18, describing the relationship between the rate of decline and staffing ratios for the ten sample boards, provides a field test for the effects of declining enrolment under the economic conditions that prevailed during the first part of the 1970s. A number of features are evident.

First, there has been an increase in the staff ratios in boards that experienced a high rate of decline that, in percentage terms, far exceeds that for boards that have experienced only low or medium rates of decline. The ratio of non-certificated to certificated staff has increased by 37% in the high-decline boards, but only by 11% in boards that experienced

TABLE 17

STAFF RATIOS BY PERCENTAGE OF FRENCH SCHOOLS IN BOARD

Ratio	Percentage of French Schools		
	Low (n = 6)	Medium (n = 2)	High (n = 2)
Non-certificated per 100 certificated			
Year 1	27.27	24.91	20.74
1976	31.58	26.14	28.75
Percentage change	15.8	4.9	39.2
Non-certificated per 100 pupils			
Year 1	1.35	1.21	0.83
1976	1.71	1.35	1.72
Percentage change	26.4	11.6	107.9
Per school for 1976			
Non-certificated	6.70	4.44	3.99
Certificated	21.50	16.65	13.50
Pupils	392	324	228

TABLE 18

STAFF RATIOS BY RATE OF ENROLMENT DECLINE

Ratio	Rate of Decline		
	Low (n = 4)	Medium (n = 3)	High (n = 3)
Non-certificated per 100 certificated			
Year 1	24.65	31.38	20.72
1976	27.37	35.04	28.46
Percentage change	11.0	11.7	37.4
Non-certificated per 100 pupils			
Year 1	1.12	1.62	0.96
1976	1.39	1.91	1.70
Percentage change	25.3	17.9	77.1
Per school for 1976			
Non-certificated	5.29	7.69	4.27
Certificated	19.15	21.83	14.83
Pupils	377	402	248

lower rates of decline. The same relationship is also apparent for the non-certificated staff to pupil ratios, where the percentage increase has been 77% in boards with high rates of declining enrolment, against an average of only 22% in boards that have experienced lower rates of decline.

The finding that staff ratios have increased the most in boards that have experienced high rates of decline in enrolment tends to confirm the view that demand does not decline as fast as enrolment, or at least did not decline as quickly as did enrolments under the economic conditions prevailing in Ontario in the early 1970s. Even then, however, this conclusion is confounded by the other characteristics of the particular boards in question. On the average, the three boards which have experienced the greatest rates of declining enrolment also had lower staffing ratios to start with than did the boards that have experienced lesser declines. And, even with the high percentage increases, their staff ratios do not exceed those for the boards that have experienced medium rates of decline. This is to be explained by the fact that of the boards that experienced high rates of decline, two are separate school boards and two are district boards (one is both). These are the types of boards that have profited by the equalization which has occurred among Ontario school boards. Thus, there is a portion of the increase in ratios noted for these boards that is due to equalization rather than to the effects of declining enrolments. Yet, because two of the three boards are separate boards, which tend to have lower ratios than public boards, their 1976 ratios were still not as high as those for boards which had experienced medium rates of decline, the latter boards being predominantly public boards.

Size of Effects of Variables

By comparing the overall averages for the non-certificated staff ratios reported in Tables 7 and 8 with the group means within each of the levels for the five classification variables, it is possible to establish the size and direction of the effects of these variables on staffing ratios. Table 19 summarizes these effects in terms of differences from the overall mean.

The interpretation of this table is quite straightforward. For example, the average public board has 1.66 non-certificated staff per 100 certificated staff more than an average board, regardless of its type, while separate boards have 2.52 fewer than average.

TABLE 19

EFFECTS OF VARIABLES ON 1976 STAFFING RATIOS

Variable	Non-Certificated Staff Per 100 Certificated	Non-Certificated Staff Per 100 Pupils
Overall Mean	29.96	1.64
Public/Separate		
Public	+ 1.66	+ 0.23
Separate	- 2.52	- 0.14
Location		
City	+ 4.67	+ 0.33
County	- 2.28	- 0.21
District	+ 0.65	+ 0.12
Size		
Small	- 4.53	- 0.21
Medium	+ 1.17	0.00
Large	+ 2.93	+ 0.21
Percent French School		
Low	+ 1.62	+ 0.07
Medium	- 3.82	- 0.29
High	- 1.21	+ 0.08
Rate of Decline		
Low	- 2.59	- 0.25
Medium	+ 5.08	+ 0.27
High	- 1.50	+ 0.06

From the effects, it is possible to construct a profile of boards with relatively high staff ratios. These boards would show positive effects on all of the variables. They would tend to be large, public school boards located in cities, having few French schools and experiencing a medium rate of decline in enrolments. In contrast, boards with low ratios would tend to be small separate school boards located in counties, having a medium number of French schools and experiencing a low rate of decline in enrolment.

The profiles given above indicate how the effects reported in Table 19 can be used to establish where the ratios for a given board might be expected to fall within the acceptable ranges identified in the preceding chapter. All that need be done is to establish the board's classification on each of the five variables, and to adjust the expected ratio upwards or downwards as indicated in the tabled values.

Unfortunately, this process of adjusting average ratios cannot be done in an arithmetic sense since there is considerable co-variation among the classification variables, implying that many of the observed effects are confounded by the effects of several other variables. For example, more separate boards operate a large percentage of French schools (Table 3), so the effects for the statute status of a board and the percentage of French schools a board operates each include a component attributable to the other. Given the small sample size, this limitation could not be eliminated by more sophisticated analysis of the data.

We can, nevertheless, be reasonably confident that the direction of the effects are correct since in most cases they are in the direction logic would dictate. Therefore, we can use the data on effects for heuristic purposes in determining how average staffing ratios should be adjusted to take into account the differing characteristics of each board.

SUPPLY AND DEMAND WITHIN BOARDS

The net surplus of non-certificated staff members in the 12 sample boards that was projected for the coming years reflects the overall situation, but does not necessarily reflect that in individual boards. In fact, some boards may expect a surplus rather than a shortage of staff.

In this section, we shall describe the various balances between supply and demand in the individual boards, and relate the different trends that are observed to the five classification variables and to staff ratios.

Supply/Demand Ratios

The ratios between remaining non-certificated staff and students for the next ten years that are used to assess the balance in supply and demand are reported for each of the 12 boards in the sample in Appendix K. Four types of curves are to be seen in these.

The first type is a "roller-coaster" curve in which there is a temporary decline before a peak is reached, followed by a drop (Figure 3). It can be inferred that boards with this type of curve, namely Boards #1, #7, and #8, can expect a short-term shortage of non-certificated staff followed by a surplus of varying magnitudes. The second type of curve exhibits an immediate rise, followed later by a steep decline. Board #4, the only board expecting this trend, can therefore expect to face an immediate surplus of staff, followed by a return to normalcy. The third type of curve represented in the graphs displays a steady and unrelenting increase, implying that a board with this trend will have a surplus of non-certificated staff for the foreseeable future (Figure 4). Board #11 is the only board with this trend. The fourth and final trend is a steady decline in the ratio, as is seen in the graphs for Boards #2, #3, #5, #6, #9, #10, and #12 (Figure 5). These boards will have a continuing shortage of staff, and will be in a position to hire new staff if current staff ratios are to be maintained.

While we have identified four types of curves in the projections of staff to student ratios, there is an implicit dichotomy in our classification scheme. The first three trends all indicate that boards having these trends have or will have a surplus of staff, while the others have a shortage. It is this dichotomy that will be used in the analysis that follows.

Correlates of Surplus and Shortage

What kinds of boards are facing a shortage or surplus of non-certificated staff? We answer this question in terms of the five variables we have used previously to classify the boards.

Table 20 reports the number and percentage of boards faced with a surplus or shortage of non-certificated staff broken down by board, size, percentage of French schools, status as a public or separate board, location, and rate of enrolment decline. A number of relationships are evident for the sample.

FIGURE 3

ROLLER-COASTER SUPPLY/DEMAND CURVE FOR BOARD #1

```
BOARD 1-I

YEAR  NO OF NC STAFF-A  PROJECTED ENROLMENT-B   A/B

1977      1961.000                92238.        .021260
1978      1837.349                88063.        .020864
1979      1743.493                83552.        .020867
1980      1662.465                78698.        .021125
1981      1584.136                74013.        .021403
1982      1508.641                69878.        .021590
1983      1432.157                66362.        .021581
1984      1355.750                63642.        .021303
1985      1280.850                61512.        .020823
1986      1207.150                59598.        .020255
RANGE .001335   SIZE OF INTERVALS  0.0002   NO OF INTERVALS
```

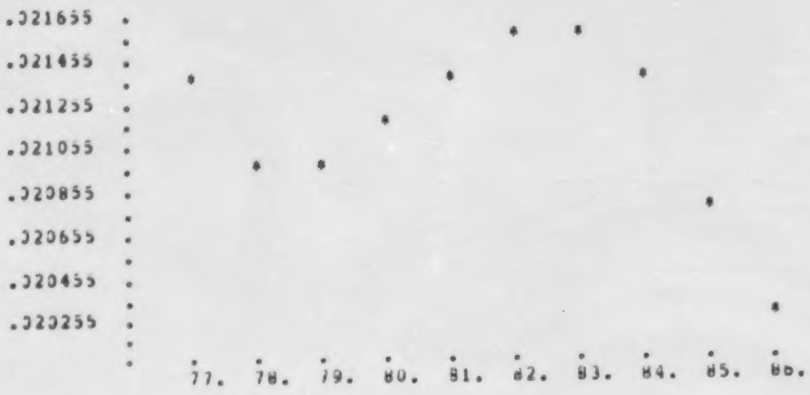


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FIGURE 4

INCREASING SUPPLY/DEMAND CURVE FOR BOARD #11

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BOARD 11

YEAR  NO OF NC STAFF-A  PROJECTED ENROLMENT-B   A/B

1977        331.000             19457.        .017012
1978        310.219             18045.        .017191
1979        298.520             16894.        .017670
1980        288.888             16153.        .017884
1981        280.281             16014.        .017502
1982        271.618             14872.        .018264
1983        263.035             14209.        .018512
1984        254.852             13649.        .018672
1985        246.543             13107.        .018810
1986        238.047             12649.        .018819
RANGE .001808   SIZE OF INTERVALS  0.0002   NO OF INTERVALS  10
```

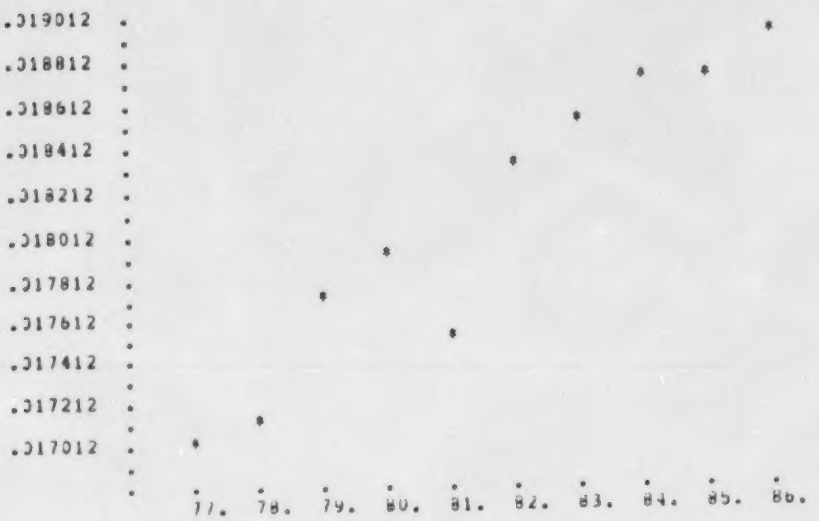

FIGURE 5

DECLINING SUPPLY/DEMAND CURVE FOR BOARD #6

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BOARD 6-T

YEAR  NO OF NC STAFF-A  PROJECTED ENROLMENT-B   A/B

1977       486.000              33511.         .014503
1978       452.487              32540.         .013906
1979       426.793              31622.         .013497
1980       406.489              30749.         .013220
1981       389.441              30044.         .012962
1982       373.316              28956.         .012893
1983       357.716              28172.         .012698
1984       342.909              27654.         .012400
1985       327.862              27288.         .012015
1986       312.858              27003.         .011586
RANGE .002917   SIZE OF INTERVALS  0.0002   NO OF INTERVALS  15
```

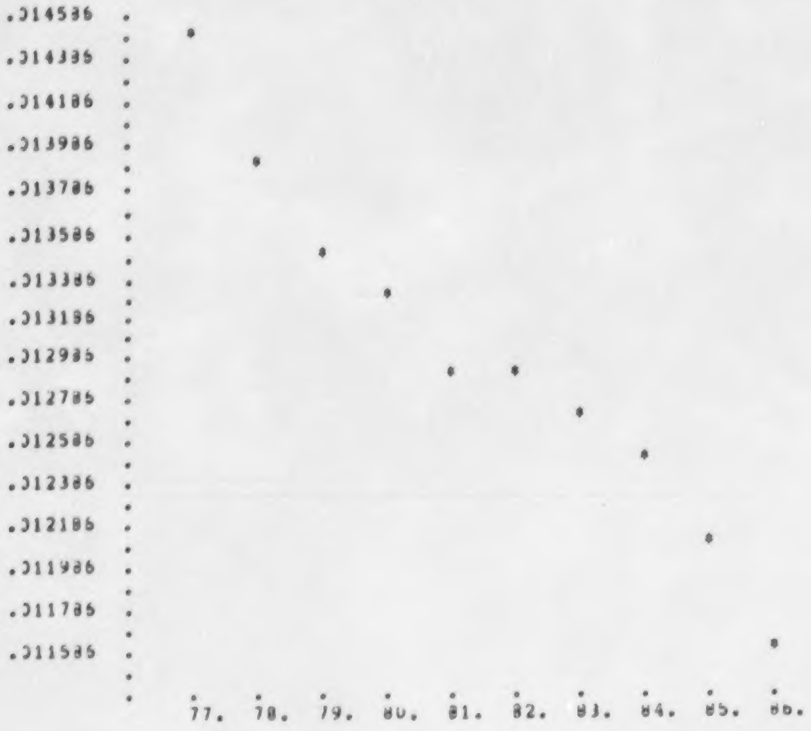

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TABLE 20

SUPPLY/DEMAND BALANCE BY SIZE, PERCENTAGE FRENCH SCHOOLS, TYPE OF BOARD, LOCATION, AND RATE OF ENROLMENT DECLINE

Variable	Supply/Demand Balance			
	Surplus		Shortage	
	n	%	n	%
Size				
Small	1	20	2	29
Medium	1	20	4	57
Large	3	60	1	14
Percent French Schools				
Low	2	40	4	57
Medium	2	40	2	29
High	1	20	1	14
Public/Separate				
Public	4	80	4	57
Separate	1	20	3	43
Location				
City	2	40	0	0
County	1	20	5	71
District	2	40	2	29
Rate of Decline				
Low	1	20	4	57
Medium	2	40	2	29
High	2	40	1	14

Surpluses of non-certificated staff are more likely in large boards, it appears, than in small or medium size boards. Fully 60% of the sample boards facing surpluses are large boards, whereas only 14% of those with shortages are small boards.

Surpluses of staff also tend to be more concentrated in public boards. Eighty percent of all sample boards expecting surpluses are public, while only 57% of those expecting shortages are public boards.

The location of a board is also related to the pattern of surpluses and shortages. Surpluses are concentrated in city and district boards, while shortages are more frequent in county boards.

Finally, we note that surpluses are more frequent in boards that have already experienced a medium or high rate of decline. Eighty percent of the boards with surplus staff are in these categories, while only 43% of the boards with shortage fall within them.

We can abstract from these cross-tabluations a profile of the board which is most likely to face a surplus of non-certificated staff. This board would be a large, public board located in a city or district, and it would already have experienced a medium or high rate of enrolment decline. Small and medium sized county boards in which there has been little decline in enrolments are the most likely to have staff shortages and be in a position to hire new staff.

Surplus, Shortages, and Staff Ratios

We have already seen in Table 19 that boards in which enrolments have declined at a high rate have also experienced large increases in staff ratios. It is probably these ratios have increased in spite of a reduction of total staff size through attrition. These overall reductions have probably resulted in the development of a more stable work force within the boards, meaning that future attrition may be less than in the past.

Table 21 reports the average staff ratios for boards expecting either surpluses or shortages of staff. There are distinctive differences between the two. The number of non-certificated staff per 100 certificated staff averages 32.3 for boards expecting surpluses, and 28.9 for boards expecting shortages, a gap of 3.4 staff members.

A similar difference occurs in the non-certificated staff to student ratio. The average value for boards that will have surplus staff is 1.87, 21% greater than the value of 1.54 observed for boards that will have shortages.

TABLE 21

AVERAGE STAFF AND PUPIL RATIOS BY SUPPLY/DEMAND BALANCE FOR 1976

Ratio	Supply/Demand Balance	
	Surplus (n = 3)	Shortage (n = 7)
Non-certificated per 100 certificated	32.30	28.94
Non-certificated per 100 pupils	1.87	1.54
Per school		
Non-certificated	6.66	5.29
Certificated	20.10	18.00
Pupils	350	344

The differences in the ratios of non-certificated staff, certificated staff, and pupils per school are also instructive. Whereas there is only a marginal difference of 2% in the average number of students per school, boards with a surplus of non-certificated staff in their futures have an average of 26% more non-certificated staff per school, and 12% more certificated staff.

These differences in ratios can be easily accounted for in terms of the traits the two types of boards exhibit. The traits of the boards that will have surpluses -- city or district location, public status, medium or high rate of decline, and large size -- were also identified in Table 19 as traits of boards with justifiably higher ratios.

In terms of personnel problems, however, the size of the staffing ratio may have a different importance. It may be more difficult for boards with already high ratios to accommodate increases in the ratios, increases that may prove the only alternative to laying off staff.

SUMMARY

In this chapter, we have related the balance in the supply and demand for non-certificated staff in sample boards to various traits of the boards. It was found that boards facing a surplus of staff are in less flexible positions to accommodate the problems created by declining enrolments because they already have relatively high staff ratios.

CHAPTER IV

ALLOCATION OF STAFF

The allocation of staff positions to schools and appointment of staff to these positions are two tasks with which all school boards must deal. For those experiencing declining enrolments and financial stringencies, these tasks become intimately entwined with the reduction in work force. And, for non-certificated staff who are members of bargaining units, there are often clauses in their contracts that control one or both activities.

This chapter is devoted to an analysis of existing modes of allocating non-certificated staff positions within school boards. The following chapter relates the experiences that a sample of boards have had to date with attrition and lay offs. Chapter 6 then considers union contracts in general, and clauses related to seniority rights, lay off procedures, and the assignment of staff, in particular.

ALLOCATION OF STAFF TO SCHOOLS

Non-certificated staff appear to fall into two categories when it comes to their deployment within school boards. Secretarial, clerical, plant operation, audio-visual, guidance, counselling, and library personnel, and those lay assistants appointed to teachers are almost always assigned to individual schools on the basis of a formula. Plant maintenance, attendance, psychological, and transportation personnel, on the other hand, are generally part of centralized units that serve schools according to demand and need. Among the staff categories in the first group, only clerical, and plant operation positions are present in sufficient numbers in the sample boards for us to make generalizations about the formulae in use, though all groups will be commented upon briefly.

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Ten of the eleven boards that responded to a question concerning the mode of allocating secretarial and clerical staff to elementary schools indicated that a formula was used in making the decisions. The remaining board indicated that staff were assigned to schools "according to need."

All formulae determined the amount of secretarial and clerical assistance provided a school on the basis of either the number of students, the number of teachers, or the number of classes, all of which can be interpreted as measures of need. All formulae also took the form of "step functions." That is, the number of staff assigned for a given range of students, teachers, or classes is stated, and then this number is increased by a given amount for the next range, and so on. These features of the allocation formulae are apparent in both Table 22, which describes the various formulae, and Figure 6, which shows two formulae in graphical form. The motivation for the term "step function" is particularly obvious in the latter.

In Table 22, the number of staff positions allocated by a formula to a school is stated in terms of full-time equivalent staff. However, in actual board formulae, a number of different measures of staff strength are indicated. For example, the formula for Board #2 describes staff allotted in terms of days per week. A school with 199 or fewer students is entitled to the services of a secretary for two days per week; a school with between 200 and 299 students, three days per week, etc. In order to convert this to our common measure of full-time equivalent staff (FTE) we counted one day per week as equivalent to 20% of a full-time equivalent staff member.

Board #3's formula used a different unit of allocation. It assigned two hours of assistance per week per class, up to a maximum of 30 hours. The latter was taken to represent an FTE position in that board, so that two hours translated into .07 FTE.

Board #8's formula allotted staff in terms of half-days per week. Given that there are ten half-days in a work week, we set this equal to .10 FTE.

Finally, a few boards, such as Board #11, assigned staff in terms of FTE. This made our work easy.

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TABLE 22

ELEMENTARY SECRETARIAL AND CLERICAL ALLOCATION FORMULAE

Board	Formula			Index of Generosity
	Students	Classes/ Teachers	Staff	
Board #1	0 - 499		1.0	1,324.0
	500 - 850		1.5	
	over 850		2.0	
Board #2	0 - 199		0.4	1,119.6
	200 - 299		0.6	
	300 - 399		0.8	
	400 - 499		1.0	
	500 - 599		1.2	
	600 - 699		1.4	
	700 - 799		1.6	
	800 - 899		1.8	
	900 - 1,000		2.0	
Board #3		1 class	0.07	800.5
		2 classes	0.14	
		...		
		15 classes and over	1.00	
Board #4	not available			
Board #5		4- 5 teachers	0.30	
		6- 7 teachers	0.40	769.0
		...		
		16-17 teachers	0.90	
		18 and over	1.00	
Board #6	25 - 74		0.30	
	75 - 124		0.40	
	275 - 324		0.80	1,072.2
	325 - 474		1.00	
	475 - 524		1.20	
	525 - 574		1.30	
	675 - 724		1.60	
	over 724		1.60	
Board #7	Basis of need			
Board #8		4.0 teachers	0.20	691.0
		4- 5.9 teachers	0.30	
		6- 7.9 teachers	0.40	
		8-10.9 teachers	0.50	
		...		
		20-22.9 teachers	0.90	
		23.0 and over	1.00	

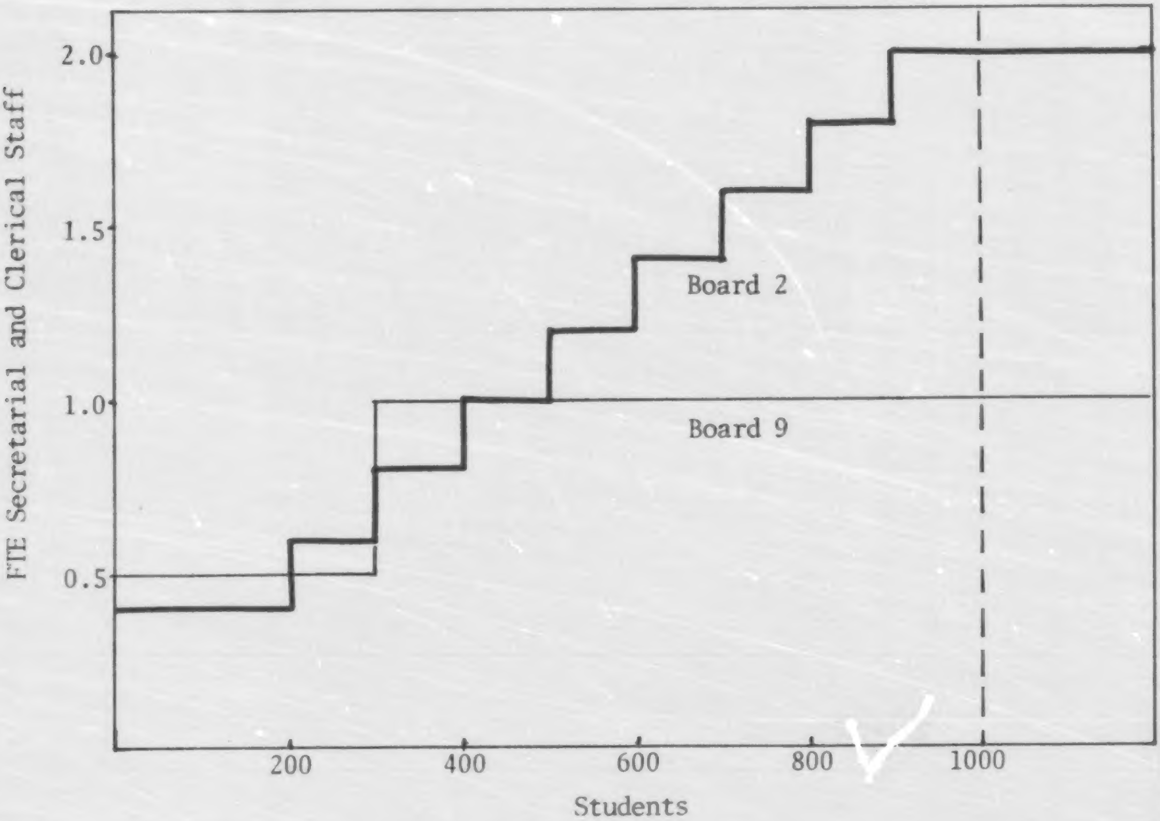
.....cont'd.

TABLE 22 (Cont'd.)

Board	Formula			Index of Generosity
	Students	Classes/ Teachers	Staff	
Board #9	0 - 300		0.5	850.0
	300 or more		1.0	
Board #10	0 - 200		0.5	815.0
	201 - 300		0.6	
	501 - 600		1.0	
	600 or more		1.0 +	
Board #11		0 - 14 teachers	0.5	710.0
		over 14 teachers	1.0	
Board #12		2 classes	0.1	748.0
		3 - 4 classes	0.2	
		5 - 6 classes	0.3	
		...		
		13 - 14 classes	0.7	
		15 or over	1.0	

FIGURE 6

ALLOCATION FORMULAE FOR ELEMENTARY SECRETARIAL AND CLERICAL STAFF FOR BOARDS #2 AND #9



Generosity and Responsiveness of Formulae

In order to compare the relative generosity (or frugality) of the various formulae, the cumulative area under the graphs were computed. This area serves as an index of a formula's relative generosity. The larger the area, the more generous the formula. In order to do this, several steps were necessary.

First, all of the variables representing need — i.e., number of students, number of teachers, and number of classes — were converted to the same unit of measure, the number of students. For this, equivalences of 30 students per class and 30 students per teacher were assumed. While these equivalencies are probably accurate for larger schools, enrolling 200 or more students, they are probably too high for smaller schools in which class sizes and numbers of students per teacher tend to be higher. Therefore, they may result in an underestimation of the generosity of formulae based on numbers of teachers or classes.

The second step in calculating the cumulative area under the graphs was summing the areas of the rectangles under each of the steps of each function. For example, the first number in the sum for Board #8 was .40 x 200 = 80, since .40 FTE staff are allocated for the range from 0 to 200 students. The second term was .50 x 100 since .5 FTE are allocated to schools with enrolments in the succeeding range from 200 to 300 students. Other terms were determined in a similar manner up to the interval with 1,000 students as its upper bound. The various terms were then added to provide the index of generosity.

For Board #2, the total index was 1,120 as contrasted with only 850 for Board #9. The greater generosity of the formula for Board #2 is evident in Figure 6. It is easily seen that the cumulative area under it over the range from 0 to 1,000 students far exceeds that for Board #9's formula.

While the cumulative area under the graph of an allocation formula does not have any commonsensical meaning, it does provide a convenient index of generosity. The index totals are listed in the right-hand column of Table 22. The formula for Board #1 is seen to be the most generous, and that for Board #8 the most frugal.

The fact that one formula is more generous than another on an overall basis does not necessarily imply that it is more generous in every case. This can be seen in Figure 6, wherein the formula for Board #9 is seen to be more generous than that for Board #2 for schools enrolling up to 200 students or from between 300 and 400 students. In the first interval, it allots .5 FTE staff as opposed to only .4 FTE staff for the other; in the second it allots 1.0 FTE staff as opposed to .8 FTE staff.

Clearly, the actual generosity of a formula in a given situation depends upon the distribution of school size in a board. For example, if all of a board's schools were in the 300 to 400 range, then the formula used by Board #9 would allot more staff positions both to individual schools and overall. On the other hand, if the schools were spread evenly over the entire range of size from less than 100 and up to 1,000, then the formula used in Board #2 would be the more generous. And, since the sizes of schools change from year to year, the effect of a given formula may change substantially from one year to the next.

One should be particularly aware of the effect a formula may have as enrolments decline. Consider, for example, what might happen to a school in a board with a two-step formula like that in Board #9. In one year, with 320 students enrolled, it would be assigned one full-time secretary; but if enrolment declined to 290 students in the following year, it would be allotted only a half-time secretary. On an aggregate basis, this formula could have a sudden and dramatic impact on the total number of staff employed in a board if a large number of schools dropped below the 300 mark in one year.

At the same time, a two-step allocation function presents another problem: it does not reflect enrolment declines until a given mark is reached, so there may be a considerable time lag between a decline in enrolment and a reduction in the number of staff. On a permanent basis, it could also mean that staff levels in very small schools with fewer than 100 students would be maintained at too high a level.

A formula's sensitivity to changes in enrolment can be increased or decreased by narrowing or widening its steps, respectively. A formula with just two or three wide intervals in which schools are classified will respond slowly to changes in enrolment, but when change does occur its magnitude will be dramatic. On the other hand, a formula with many small intervals would give a more immediate and smoother response, but might not allow a sufficient time lag between the loss of students and the decline in work load.

One interesting lack in all but one of the formulae reported is a recognition of the decreasing marginal impact of additional students. In general, the formulae increase staff allotted in increments of the same size regardless of the number of students in a school. The same increment in staff is given for moving from step 6 to step 7 as from step 1 to step 2. The one exception to this is the formula for Board #8. In it, an increase from 4 to 5.9 teachers earns .10 additional FTE, whereas it takes an increase from 8 to 10.9 teachers to earn an additional .10 FTE staff for schools in that range. In the smaller school, each additional teacher earns .05 FTE staff for the school, but in the larger school each additional teacher accounts for an increase of only .03 FTE. And for additional teachers in schools with 23 or more staff, no more secretarial assistance is granted.

Generosity of Formula by Board

Although the actual generosity of a formula can only be determined by applying it to the size distribution of schools in a board, it is possible to use the area index to measure the formula's theoretical generosity so that one can investigate the nature of boards which have adopted formulae offering different levels of support. To do this, the average values of the index of generosity were computed for the various categories of boards broken down by size, statute status (public/separate), percentage of French schools, location, rate of decline, and balance in supply and demand. The results are tabulated in Table 23.

Typically, boards with more generous formulae are large public boards with a low percentage of French schools and experiencing a medium rate of decline in enrolments. Less generous formulae tend to be found in medium or small separate school boards enrolling a larger number of French speaking students. There tends to be no relationship between the balance between the supply and demand for staff, and the generosity of the formulae.

The profile of the typical board with a generous formula is not unlike that for the typical board having a high staff to pupil ratio. To test this similarity, the rank order correlation coefficient was found between staff to pupil ratios and the generosity index values; a correlation of .32 was found. Though not statistically significant, this value is in the expected direction. A larger value was probably not found because elementary school secretarial and clerical staff form a relatively modest proportion of the total complement of non-certificated staff.

TABLE 23

AVERAGE AREA UNDER FORMULA GRAPH BY SIZE, PERCENTAGE OF FRENCH SCHOOLS, STATUTE STATUS, LOCATION, RATE OF DECLINE, AND SUPPLY/DEMAND BALANCE

Variable	N	Mean
Size		
Small	3	799
Medium	5	839
Large	2	1,035
Percentage of French Schools		
Low	5	966
Medium	3	837
High	2	780
Statute Status		
Public	6	963
Separate	4	781
Location		
City	2	1,017
County	5	869
District	3	823
Rate of Decline		
Low	5	829
Medium	3	1,066
High	2	780
Supply/Demand		
Surplus	3	908
Shortage	7	882

Six of the eight public boards reported formulae for allocating secretarial and clerical staff to secondary schools (see Table 24). As with the elementary formulae, the secondary allocation rules take the form of step functions. However, all formulae are based on numbers of students; none are based on numbers of teachers or classes, as was the case with some elementary school allocation formulae. The width of the steps in terms of the numbers of students varies from 87 in Board #8 to 350 in Board #1. Most of the formulae take the fixed costs of operating a secondary school into account by making a basic allocation of two or three staff per school regardless of the school's size.

In comparison to the elementary formulae, those for secondary schools are both more generous and more uniform. Typically, the formulae would provide about five secretarial and clerical staff for a secondary school with 1,000 students, whereas the typical elementary formula would have provided at most two staff members. The greater uniformity of the secondary formulae can be seen from the values of the generosity index which were computed over a range in school size from 0 to 1,500 students. For secondary formulae, the values range from a low of 5,100 to a high of 6,900, a difference of 1,800. Expressed as a ratio of the index average of 5,872, the range is 31% of the average. In contrast, the elementary figures ranged from 691 to 1,324, a difference of 633. This range equals 71% of the average value of 890.

Rideout (1977) noted the tremendous variation in staffing patterns present in elementary schools. It appears that much of this variation can be explained by the variation in staff allocation formulae. Rideout does not include an analysis of staff in secondary schools, but our data suggest that greater uniformity would be found at that level. We are not able to explain why there tends to be a consensus among the various boards on the allocation of secretarial and clerical staff to secondary schools, but a lack of consensus on their allocation to elementary schools.

The relationship between the actual generosity of a formula and the distribution of school sizes in a board that was noted for elementary schools is equally applicable to secondary schools. In particular, since most formulae recognized fixed costs, most of the formulae in Table 24 would become more generous, relatively speaking, as school enrolments decrease. On the whole, the secondary formulae would tend to be more sensitive to changes in enrolments than the elementary formulae since

TABLE 24

SECONDARY SECRETARIAL AND CLERICAL STAFF ALLOCATION FORMULAE

Board	Formula		Index of Generosity
	Students	Staff	
Board #1	0 - 850	3.0	5,450
	851 - 1,200	4.0	
	1,201 - 1,800	5.0	
	1,801 - 2,100	6.0	
	2,101 and over	9.0	
Board #2	0 - 500	2.0	5,100
	500 - 699	3.0	
	700 - 799	4.0	
	800 - 899	4.5	
	900 - 999	5.0	
	1,000 - 1,099	5.5	
	1,100 - 1,299	6.0	
	1,300 - 1,500	6.5	
Board #3	0 - 600	3.0	6,900
	601 - 800	4.0	
	801 - 1,000	5.0	
	1,001 - 1,200	6.0	
	1,200 and over	7.0	
Board #4	not available		
Board #5	0 - 450	2.0	5,500
	451 - 750	3.0	
	751 - 1,000	4.0	
	1,001 - 1,300	5.0	
	1,301 - 1,600	6.0	
	1,601 - 1,900	7.0	
	1,901 - 2,200	8.0	
Board #6	0 - 374	2.0	5,812.5
	375 - 499	2.5	
	500 - 624	3.0	
	625 - 749	3.5	
	750 - 874	4.0	
	875 - 999	4.5	
	1,000 - 1,124	5.0	
	1,125 - 1,249	5.5	
	1,250 - 1,374	6.0	
	1,374 - 1,499	6.5	
	1,500 - 1,624	7.0	

.....cont'd.

TABLE 24 (Cont'd.)

Board	Formula		Index of Generosity
	Students	Staff	
Board #7	Basis of need		
Board #8	0 - 218	1.0	6,471
	219 - 306	1.5	
	306 - 393	2.0	
	394 - 481	2.5	
	482 - 568	3.0	
	569 - 656	3.5	
	657 - 743	4.0	
	744 - 831	4.5	
	832 - 918	5.0	
	919 - 1,006	5.5	
	1,007 - 1,093	6.0	
	1,094 - 1,181	6.5	
	1,182 - 1,268	7.0	
	1,269 - 1,356	7.5	
	1,357 - 1,444	8.0	
	1,445 - 1,531	8.5	

they include a minimum of five steps, as opposed to two for some elementary formulae. On the other hand, since most secondary school formulae allocate secretarial and clerical staff on a whole of half FTE basis, any downward adjustments in the numbers of staff allocated are likely to have substantial impact on the schools affected.

The formula for Board #6 included a clause that gives greater autonomy to the principal of a school than is suggested by the formulae for other boards. In this board, a principal may, if he or she chooses, reduce the formula below the .5 FTE staff allocated for every 125 students, and use the monetary savings for other purposes. That is, the school retains the funds allocated by the board, but may use some of them for alternative purposes. Conversely, the principal may also increase the staff level above that indicated by the formula, taking the necessary funds from the supply budget. Such flexibility would appear to be quite helpful in easing the transition from one level of staffing to another. No such flexibility was noted for any elementary formula.

As for secretarial and clerical staff, most boards reported that a formula is used to allocate caretaking and cleaning staff to schools. Formulae varied from a simple allocation based upon the square footage of the school buildings involved, to a moderately complex formula with nine terms.

Board #1 is in a unique position in comparison to the other boards in that it is allocated funds for operation of schools from the Metropolitan Toronto School Board. The formula used for this purpose (Appendix L) includes recognition of gross area, enrolment, teachers, elevators, site acreage, swimming pools, portables, and numbers of schools. The board reported that the formula generates sufficient revenue to employ one staff member for every 15,000 square feet.

Board #2 also employs one staff member for each 15,000 square feet, but other factors were reported as being taken into account as well.

Board #5 determines the number of caretaking hours required per school on the basis that one person should be allocated for every 19,500 square feet. A bonus of one staff member for every 75,000 square feet is added for each secondary school.

Board #8 uses a formula with five factors that were previously noted in the Metro formula. In essence, this board's formula allots one staff member for a typical school with eight teachers, 225 pupils, 11 teaching areas, 12,000 square feet, and a site of three acres. The allocation for a given school is then adjusted against this standard by use of the following formula:

$$\text{N staff} = \left[\frac{\text{N teachers}}{8} + \frac{\text{N pupils}}{225} + \frac{\text{N teaching areas}}{11} + \frac{\text{sq. ft.}}{12{,}000} + \frac{\text{Acres}}{3}\right] \Big/ 5$$

Board #10 allocates caretaking staff according to the numbers of classrooms: up to 8 classrooms, 1; 9-14 classrooms, 2; 15-19 classrooms, 3; and over 20 classrooms, 4.

Board #12 defines a standard school requiring 40 man-hours of work per week as one with seven classrooms and one all purpose room. Assistance for individual schools are prorated against this figure.

Other boards in the sample, though not providing formulae, indicated that staff were assigned on the basis of the size of the school, level of utilization, number and type of cleaning areas, and construction of the school.

In their comments, board personnel noted that school operations is one area that is particularly unaffected by declining enrolments, except when schools close. This statement is corroborated by the formulae used. In them, numbers of students play a relatively insignificant role.

One method of saving money and gaining flexibility that several boards reported was the practice of signing contracts with private companies for cleaning schools. Informal discussions indicated that this method is more economical since contracts are typically awarded to the lowest bidder on a biannual basis and any continuing obligations to permanent staff are avoided. However, the service is usually less satisfactory than that provided by their own staff.

A second method of reducing expenditures is increasing work load. The formulae above indicate different expectations among boards as to what one person can be expected to accomplish. Square footages per person ranged from 12,000 (with adjustments) to 19,500. Of course, standards of maintenance will also vary from community to community.

Other Non-Certificated Staff

Reports of allocation formulae for lay assistants and audio-visual personnel were scattered, so generalizations are difficult.

The most common practice as far as lay assistants are concerned is to allocate one each to Kindergarten classes, particularly if the class exceeds some minimum enrolment, such as 25 children. Four boards reported a practice like this. One board also reported allocating one lay assistant to each behavioural and multiple handicapped class, while another left the option of having lay assistants in a school up to the individual principal, with the understanding that each lay assistant employed reduced the number of academic staff by .5 FTE. The latter regulation was the only one noted which seemed to place certificated and non-certificated staff in direct competition for jobs.

A formula for allocating lay assistants to secondary schools was reported by one board, Board #6. Allocation is by enrolment: 0-800, 1; 801-1,000, 2; and over 1,000, 2.5. The allocation for schools with over 1,000 students enrolled includes a position for an administrative assistant. The terms of this allotment recognized the possibility of a decline in enrolment by allowing for the administrative assistant to be retained if enrolment falls below 1,001. However, it specifies that after one year, the position must be covered within the regular per pupil staff allotment.

Only two boards reported a systematic method of assigning audio-visual technicians. In Board #1, each junior high school and each secondary school is assigned one; in Board #5, each secondary school is assigned one.

CENTRALIZED SERVICES

Remaining non-certificated staff tend to be part of centralized units which serve the whole board on request or need. We would include within this group the secretarial and clerical staff assigned to the central office, though we do not deal with these specifically.

Plant Maintenance

Plant maintenance is provided on a system-wide basis in the sample boards; there is no allocation by formula to schools. Typically, the smaller boards employ one or two generalists to do repairs, contract for the regular services of specialists, and tender bids for major renovations.

The complexity of the Metropolitan Toronto environment is reflected in the formula which allots Board #1 its funds for maintenance (Appendix M).

Guidance, Counselling, Psychological, and Attendance

Staff in these four areas serve boards on a system-wide basis in the three boards reporting the employment of non-teaching staff in these areas. In other boards, all personnel involved in technical and specialized responsibilities in these areas were apparently certificated teachers.

Psychological services and attendance counselling is typically provided on a need or referral basis. One board estimated that psychological services were split evenly between elementary and secondary school children.

The effects of declining enrolments on job opportunities for non-certificated staff were clear in one board where a half-time non-certificated attendance counsellor was replaced by a quarter-time certificated staff member. On the other hand, in another board the implementation of a new Early School Leaving Committee resulted in the addition of a half-time non-certificated staff member to help the full-time certificated attendance counsellor with the work load.

On the whole, there was very little evidence of an appreciable number of professionals in the helping professions who did not hold teaching certificates being employed in the sample boards. Presumably, these roles have either been eliminated, as in the case of health, or are filled by certificated personnel. In the case of psychological services, this possibility raises the question as to the professional qualifications of the individuals involved to perform these services, an issue that is considered in a later chapter.

SUMMARY

Formulae are regularly used to allocate secretarial, clerical, and caretaking staff to schools. These formulae determine both the total number of staff that will be allocated, and the number which each school will be assigned.

In the case of secretarial and clerical staff, the formulae are all step functions, with staff being allocated in units of from .07 to 1.0 full-time equivalent staff. The size and number of steps are critical in determining how a given formula will affect a school's allocation as enrolment declines. Steps that are too infrequent and too large could cause disruptive changes. Steps that are too frequent and too small may reduce staffing too rapidly, allowing no time lag during which work loads could be adjusted. Few formulae give the principal the flexibility that is needed to adjust the numbers of staff to meet these problems.

Formulae for allocating caretaking staff are more complex than those for secretarial and clerical staff, and are tied to the size and character of the physical plant involved rather than numbers of students. These formulae would not be responsive to declines in enrolment, but then neither is the work load except when schools are closed. A particular threat to caretaking staff is the possibility that the work will be contracted out. Contracted services tend to be less expensive, but of lesser quality, than those provided by regular staff.

Maintenance and various technical types of assistance in guidance, counselling, attendance, and psychological services tend to be provided on a centralized basis. Larger boards maintain specialists in all areas, while smaller boards tend to rely on generalists. Because many smaller boards contract out for special maintenance work, and because many staff involved in guidance, counselling, psychological and attendance services may be certificated, it is difficult to compare the different levels of service in the sample boards with the data at hand.

Cases were noted where the numbers of non-certificated staff have been reduced, either by decreasing the generosity of the allocation formula or transferring responsibilities from non-certificated to certificated staff. How the staff were reduced, whether by attrition or dismissal, is the topic of the next chapter.

CHAPTER V

ATTRITION AND DISMISSAL OF STAFF

The spectre that arises from consideration of the problems posed by declining enrolments is the possibility of massive lay offs. We have already seen, however, that in only five of the twelve boards are there likely to be surpluses of staff. Examination of the experience in the boards to date is also encouraging, in that attrition has been and will be able to solve many problems.

ATTRITION

Boards were asked if "non-certificated staff had been reduced in size through a policy of attrition adopted as a direct or indirect response to financial stringencies." Nine of the twelve boards responded that they had.

As of January 1978, Board #1 had reduced its number of caretakers by 52, and the number of school office staff by seven. Other vacancies are not being filled, with the intention of reducing the number of permanent staff in some areas. In particular, one-quarter of all maintenance work is now being contracted out. In this way, it is hoped that no permanent staff will have to be laid off as the decline in enrolment lessens the demand for services.

Board #2 has decreased the number of staff through attrition, and follows the practice of placing the names of employees no longer needed as the result of cut-backs on an "available for transfer" list. Given that the balance between supply and demand for this board was in favour of demand, this board may be able to accommodate declining enrolments without staff lay offs.

Though Board #5 has the lowest non-certificated staff to certificated staff and non-certificated staff to student ratios among the public boards, it reported considerable reduction in staff through attrition. In 1976, registered nurses in secondary schools had been reduced in number, co-op students from a nearby university had been dropped, casual secretary use in secondary schools had been discontinued. As well, the formula for allocating caretaking staff had been revised downward in both 1972 and 1976 by increasing the square footage for which one individual was responsible. The current figure, at 19,500 square feet per person, was the largest figure used among the boards in the sample. Three positions were eliminated by these reductions in formula, but the cut backs were made by attrition. This board also has the second most frugal allocation formulae among public boards for the allocation of secretarial and clerical staff, to both elementary and secondary schools.

Boards #7 and #8 have had reductions in staffing due to financial stringencies. In one case, the closing of some facilities also meant there was an accompanying decrease in demand.

Board #9, a separate school board in Northern Ontario, reported a 30% reduction in administrative staff and in plant maintenance. Psychological services have been dropped, and plant operation been reduced by 10% -- all through attrition.

Boards #10 and #11 have also reduced staff through attrition. Part of this was accomplished in Board #11 by closing 11 schools in 1977 alone. Though enrolments in this board have declined by one-third, specialized services have been reduced two-thirds. Discouragingly, the supply and demand balance is weighted far on the side of supply in this board. Further declines in enrolment may well necessitate lay offs.

Three boards, #3, #6, and #12, reported that no reductions had been necessary. Should they become necessary, all three are in good positions in terms of the balance of supply and demand. None of the three are likely to have surplus staff as enrolments decline.

LAY OFFS

Lay offs during the past year that were due to financial stringencies occurred in only one of the boards surveyed, Board #5. In all, 16 FTE staff were dismissed. The equivalent of ten full-time employees engaged in lunch room supervision lost their positions, as did six full-time registered nurses employed in secondary schools.

Were the financial stringencies that caused the reduction in positions the result of declining enrolments? That is, if enrolments had been steady, would the boards have had sufficient revenue to maintain some or all of the positions eliminated through attrition or lay off?

The answer from Board #5, which had the lowest non-certificated staffing ratios among the public boards and which had been forced to lay off 16 FTE staff in 1977, is perhaps the most succinct:

> Total enrolments did not decline significantly from September 30, 1975 to September 30, 1977. Elementary panel declined by 141 students while the secondary panel increased 15 for a net two year decline of 126 students. The revenue lost [from the province] coupled with that portion of cost obtained from the municipal tax levies would not have saved many of the positions lost.

Their judgement may be somewhat pessimistic. At the 1978 grant ceiling for recognized ordinary expenditure, 126 elementary students would earn a board $162,540 from local and provincial sources. Nevertheless, this board, which in 1976 spent $1,240 per elementary student, clearly illustrates the financial dilemma of boards spending at or below grant ceilings. As enrolments decline, they lose not only the provincial share of the revenue the students "earned," but the local shares as well. This occurs because, as enrolment drops, a board's equalized assessed value per pupil rises, and as it rises, the provincial government pays a smaller share of the cost of each student enrolled in the board. Thus, any savings due to declining enrolments accrue not to the local board, but to the province as a whole (Rideout, 1977, p. 121). Of course, boards have the option of spending over the grant ceilings. However, Board #5 has seen its local tax bill increase from $4,000,000 to $8,000,000 in five years, and its trustees may well be reluctant to increase taxes further.

The same points raised in Board #5's response to the query about the causes of its financial stringencies were repeated in several other boards, though respondents for Boards #1, #8, and #9 felt that declining enrolments were the main culprit. Board #2's response suggested that increased costs, more than anything else, was the major cause of difficulties.

Regardless of the reasons for financial stringencies there was a consensus that even including a weighting factor for declining enrolments in the provincial education grant formula, a factor which had been included between 1972 and 1975, would not solve the problem. All that could be done, in their view, was a long term financial commitment from the province that would enable them to plan more effectively.

The need for a long term financial plan by the province was driven home by the business officials who were involved in planning their boards' budgets at the time the data were collected. Several indicated that for 1978, as in 1976, major changes in the grant regulations forced them to rework much of their boards' budgets. The fact that when regulations are announced in January or February, the boards are already in their fiscal year creates additional problems. Typically, any budget shortfalls will have to be made up in the second half of the fiscal year alone.

SUMMARY

To date, the reduction in the numbers of non-certificated staff in Ontario school boards has proceeded primarily through attrition. There is a consensus that declining enrolments will result in a reduction of staff, though the degree of reduction is uncertain. The major management problem perceived is the uncertainty, from one year to the next, about the magnitude and form that provincial grants will take. Staff members face these same uncertainties in their own jobs. It is for this reason that many have formed bargaining units and insisted on clauses related to seniority and lay offs in their contracts, as we shall see in the next chapter.

CHAPTER VI

UNION CONTRACTS AND THE REDUCTION IN STAFF

There are many different reasons for employees to form bargaining units and, having formed them, to bargain for various clauses in their contracts. During the period of growth in the size of school boards, most bargaining issues raised by their employees revolved around the allocation of resources. Hence, an agreement with school bus drivers may include a clause describing procedures for assigning brand new school buses, and all agreements include clauses that ensure promotions are fairly made. But in times of staff reduction, job security becomes the pre-eminent issue. Seniority, always important, becomes more so. Seniority in a given unit is not enough; seniority at a given level is also demanded. Procedures for lay offs also take on a new importance, as do procedures for recall of staff. To ensure that no staff members are displaced when it is not absolutely necessary, demands are made for full information on hiring, firing, retirements, deaths, and disabilities. Clauses are negotiated specifying when services can be contracted out. And, finally, recognizing that grievances are bound to occur as staff is reduced, special procedures are developed to resolve grievances that arise from lay offs.

Not all of the school boards in Ontario have signed agreements specifying all of the clauses suggested above, but the process has begun. Some, escaping the ravages of major declines in enrolment, may never have to. They, unfortunately, are few in number.

BARGAINING UNITS BY BOARD

Of the 12 sample boards, 11 were asked to provide information on union agreements. Of the 11, one indicated that it had none. In the others, agreements had been signed with between one and five bargaining units.

In most cases these were locals of the Canadian Union of Public Employees (CUPE), though in a few instances they were other unions or staff associations recognized as bargaining agents.

There were a total of 19 collective agreements reported in the 11 boards surveyed. These were distributed across all employment categories except health, as shown in Table 25. Plant operations were covered by agreements in 10 of the boards, plant maintenance in nine, and secretarial and clerical staff in school office administration in six of them. All but one of the agreements for plant maintenance, for plant operations, and for secretarial and clerical staff were with union affiliates.

Less frequently covered by collective agreements were lay assistants in day school regular programs, audio-visual technicians, guidance and counselling specialists, and personnel in libraries, attendance, and food services. Personnel in psychological services were covered in only one, non-union agreement.

CLAUSES RELATED TO JOB SECURITY

The major issue that confronts non-certificated staff in boards experiencing financial stringencies that have been brought about both by declining enrolments and less provincial support for education appears to be job security. This issue manifests itself in several ways. First, there is the question of the rights and welfare of senior employees. How can these be protected? Second, if it is necessary that there be a reduction in work force, the question arises as to the order in which staff are to be laid off. Complementing this issue is that of the order of staff recall. And, during a lay off, what are the rights of those laid off? Do they accumulate seniority during this period? How long do they retain the right of recall? Finally, there is the threat common to all employees, senior or junior, that their entire unit may be dismissed, their functions either being discontinued or contracted out to an outside firm or organization. How can bargaining units protect themselves against this possibility?

TABLE 25

BARGAINING UNITS BY CATEGORY AND BOARD†

Category of Staff	Board Number										
	1	2	3	5	6	7	8	9	10	11	12
School Office Admin. Sec. & Clerical	1	-	1	1	A	1	1	-	-	-	-
Day School Regular Lay Assistant	1	-	1	-	-	-	1	-	-	-	-
Audio Visual Tech. and Spec.	1	-	1	1	-	-	1	-	-	-	-
Guidance and Counselling Tech. and Spec.	-	-	-	1	-	-	1	-	-	-	-
Library Tech. and Spec.	-	-	-	-	-	-	1	-	-	-	-
Psychological Services Tech. and Spec.	A	-	-	-	-	-	-	-	-	-	-
Attendance Tech. and Spec.	A	-	-	1	-	-	-	-	-	-	-
Health Tech. and Spec.	-	-	-	-	-	-	-	-	-	-	-
Food Services Tech. and Spec.	-	-	2	-	-	-	-	-	-	-	-
Plant Operations Tech. and Spec.	2	1	2	2	1	1	2	-	A	1	1
Plant Maintenance Tech. and Spec.	3	1	2	2	1	1	2	-	A	1	-
Transportation Tech. and Spec.	4	-	-	-	1	1	-	-	-	1	-

†Numbers represent local union affiliates. Within boards, categories marked with the same number are in the same affiliate. Letters represent employee associations certified as bargaining units. Data were not collected from Board #4; Board #9 has no union agreements.

Seniority Clauses

The traditional purpose of seniority clauses has been to give employees "an equitable measure of job opportunity and job security."[1] In the past, the emphasis has been on opportunity: most agreements specify how jobs are to be posted so that all employees may be aware of opportunities for promotion; how seniority is to be weighed in the process of selection; and how an applicant may grieve if he or she believes than an improper assessment has been made. As systems decline in size, the opposite process becomes the key issue. Namely, how orderly *downward* mobility is to be accomplished. In many respects, this presents a more difficult management problem since, in theory, the elimination of a single position occupied by a senior employee can set off a bumping chain that would see virtually every employee moved to a position of less responsibility, pay, or status. When promotion is the issue, those who are passed over suffer no actual loss; when retrenchment is the issue, everyone may suffer.

Given the role of seniority in determining job security, its operational definition becomes of utmost importance. Its definition can become surprisingly complex it if includes distinctions among seniority within functional specialties, hierarchical levels, full- and part-time positions, etc.

Table 26 provides brief versions of the six elements found in seniority clauses in the 13 agreements supplied by the sample boards which serve to define the concept. We shall discuss each of these briefly, giving examples of some of the clauses and their implications. We remark as well about the distribution of various clauses among the boards, and the differences between union and non-union agreements. Our purpose, it should be noted, is not to evaluate the various clauses or to suggest that any or all should be included in agreements between boards and non-certificated staff bargaining units. A clause that may be deemed of importance in one context may be totally irrelevant in another. Whether or not a given clause should appear in a particular agreement is, of course, a matter to be decided by the parties to the agreement over the bargaining table.

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[1] All clauses are quoted from original sources. References are not given in order to protect the anonymity of the boards.

TABLE 26

CLAUSES IN CONTRACTS DEALING WITH SENIORITY, LAY OFF, AND RECALL†

Topic/Clause	Board #1					3		6		7	10	11	12
	1	A	2	3	4	1	2	A	1	1	A	1	1
Seniority													
Seniority by function or level	N	N	Y	Y	Y	N	N	N	N	Y	Y	N	N
Seniority by part- or full-time	NC	NC	NC	NC	NC	Y	Y	Y	Y	NC	NC	NC	Y
Seniority accumulated during lay off (months)	3	3	0	12	3	0	12	NC	NC	NC	NC	NC	NC
Seniority accumulated while transferred (months)	Y	Y	N	N	N	N	N	NC	N	N	NC	6	Y
Retention of seniority during lay off (months)	12	12	12	12	12	6	12	NC	24	24	NC	12	12
Probation period (months)	6	12	6	6	6	4	3	NC	3	3	6	2	3
Lay Off and Recall													
Order of lay off	S+	S+	S	S+	S+	S	S	S	S+	S	S+	S+	S
Order of recall	S+	S+	S	S+	S+	S	S	S	S+	S+	S+	S+	S+
Bumping procedure on lay off	NC	NC	Y	Y	Y	N	Y	NC	Y	N	NC	NC	NC
Bumping on return from transfer	N	N	N	N	N	NC	NC	NC	Y	Y	NC	NC	NC
Recall Rights during forced transfer (months)	NC	NC	NC	30	NC	NC	NC	NC	NC	NC	NC	NC	NC
Frequency of seniority, employment lists (mths)	12	12	6	6	6	12	12	12	12	12	6	1	6

TABLE 25 (Cont'd.)

Topic/Clause	Board #1					3		6		7	10	11	12
	1	A	2	3	4	1	2	A	1	1	A	1	1
Rights and Benefits													
Loss of seniority due to absence without leave (days)	3	3	3	3	3	0	0	NC	5	5	NC	2	3
Loss of seniority due to failure to return from lay off (days)	7	7	7	7	7	7	7	NC	7	7	NC	14	5
Retention of benefits during lay off (months)	NC	NC	NC	NC	NC	NC	NC	NC	1+	NC	NC	NC	12+
Contracting													
Contracting out services	NC	NC	NC	NC	NC	C	NC	NC	C	C	NC	C	C

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†Numbers indicate union agreement; letters non-union agreements.

Seniority by Function and Level

Clauses which define seniority within certain specific functional areas or within given levels of hierarchy are found in five agreements. In their effect on lay off procedures, the two types of seniority prove to be very different.

Functional specialization implies that a bargaining unit is in fact divided up into two or more independent subunits. That is, seniority is not bargaining-unit-wide, but only within the area of specialization. Separate seniority lists are compiled for each group. The effect of this definition of seniority is apparent when lay offs occur, since lay offs are usually related to seniority. Lay offs would occur by specialization, and in theory it would be possible for one section of the bargaining unit to be hiring while another part is laying off employees.

An example of seniority by function is found in Board #1's agreement with plant maintenance personnel. In it, seniority is by craft, 24 of which are listed in the agreement. The same board's contract with transportation personnel has three seniority groups -- bus drivers, truck drivers, and garage workers. This latter agreement contains a clause unique among the contracts studied. It allows for recall rights for employees of one seniority group who have been transferred to other bargaining units within the school board. Note that the employee has no transfer or bumping rights to other seniority groups within the unit:

> It is understood and agreed that an employee laid off from his group under this clause shall have no right to transfer to or displace a junior employee in any other group. In the event that an employee is displaced from his seniority group pursuant to the provisions of this clause but rather than being laid off from employment with the Employer is transferred to another bargaining unit of the Employer, then, for a period of 30 calendar months he shall retain recall rights to his former seniority group and thereafter he shall cease to have any recall rights provided, however, that an employee shall be permitted to exercise such recall rights on one occasion only during his period of employment with the Employer.

Seniority within function seems to provide a very orderly mode of deciding who should be laid off: the individual with least seniority. No one else is displaced in the process.

Seniority by hierarchical level is only found in units wherein there is a progression of positions all in the same functional area. One good example is plant operations. Caring for a large and complex secondary school demands far more employees, some with superior skills both in knowledge and supervising ability, than does caring for a small elementary school. Yet, unlike tradesmen, caretakers are generalists, the differentiation is by levels of responsibility rather than type of skill. Hence there is a natural justification for grading positions to form a hierarchy.

Not surprisingly, those involved in plant operations are interested in job security at a given level. To satisfy this desire, the collective agreement negotiated in Board #1 thus defined two types of seniority -- "Board Seniority" and "Code Seniority." There are 10 code positions, each referring to different levels of responsibility. Code 1 includes caretakers with 4th and 3rd class certificates; Code 4 includes head caretakers of public schools up to 14 rooms; Code 6 includes head caretakers of public schools with 26 or more rooms; and Code 8 includes head caretakers at high schools with up to and including 1,599 students.

The importance of the issue of seniority by hierarchical positions combined with the intricacies of the definition and its implications for staff assignments are such that we quote the clause in full:

> Seniority as referred to in this Agreement shall be of two types -- "Board Seniority" and "Code Seniority". "Board Seniority" shall mean length of continuous service in the employ of the employer. "Code Seniority" shall mean length of continuous service within a code as listed on Schedule A provided, however, that the Code Seniority of an employee who has one year or more continuous service in that code shall be deemed to be equal to his Board Seniority. If an employee is transferred to a different Code then his Code Seniority in that Code to which he is transferred shall commence from the date of that transfer, and after one year continuous service in that Code, it shall be deemed to be equal to his Board Seniority, provided that in all cases an employee's Code Seniority in Code 1 shall be deemed to be the same as his Board Seniority.
>
> In the event that an employee voluntarily or by demotion transfers to a lower rated Code other than Code 1, then his Code Seniority in that Code to which he is transferred shall commence from the date of his transfer. In the event that a school is reclassified into a different Code, then the Head Caretaker in that school shall forthwith be deemed for all purposes of this Agreement, to be reclassified in that different Code, whether it be a higher or a lower rated Code, provided that if it is a lower rated Code, then that Head Caretaker shall be deemed to have top Code Seniority in that lower rated Code.

Unlike the definitions of seniority by function, this definition of seniority be level allows the employee to move from one group to the other within the bargaining unit. In particular, it specifies where the person is to be placed in the seniority list within another level. However, when it comes to lay offs, both Code and Board Seniority are invoked, as we shall see later.

The definitions of seniority by function and level discussed to this point were all selected from agreements in force in a single, large, urban, public school board. The remaining two boards which have agreements in which seniority is defined in this manner are very different types of boards.

Board #10 is a medium sized separate school board comprising a single county. Its agreement with a staff association covers both maintenance and operations personnel, but requires that separate seniority lists be maintained for the two groups.

Board #7, a small, public board in a northern district, has a union agreement that is still more inclusive. It covers secretarial and office workers as well as maintenance and operations personnel. Two seniority lists are maintained in accord with this contract, one for secretarial and office workers, and one for maintenance and operations staff.

Based on the findings for these three boards, we would advance the hypothesis that functional specialization is a function of the size of the board and that, given the acceptance of functional lines by the parties in question, there is no intrinsic conflict between the interests of those with different specialties that would prevent them from being part of the same bargaining unit, even in larger boards. This view is supported by the fact that in all boards except the first, maintenance and operations staff are in the same bargaining unit. Hence, seniority by function appears to serve the purpose of distinguishing between what amounts to separate bargaining units that are joined together for the purposes of negotiating their salaries and basic rights. From the perspective of the school system administrator who must manage retrenchment, it appears to matter little whether one or several bargaining units are involved (assuming the content of the agreements is similar) since it is the seniority lists that determine the pattern retrenchment must follow. This is not to say, however, that the number of bargaining units may not effect the relative effectiveness of the bargaining process, or the complexity involved in administering contracts.

Even in contracts that define seniority on a bargaining-unit-wide basis, there are often clauses that have the effect of creating separate seniority groups, though not explicity so. The clauses to which we refer are normally found in sections of the contracts related to lay offs, and they state that though the least senior person is to be laid off, the remaining staff members must be able to handle the work. An example of such a clause is found in the contract with maintenance and operations personnel in Board #11: "Seniority shall be the governing factor in promotions, demotions, transfers, lay-offs, and recall, provided that the more senior employee is qualified." Thus, if the most junior employee was an electrician who was needed by the board, he or she might be exempt from lay off while a more senior employee not holding such qualifications was laid off.

The same type of clause may also apply in the case where hierarchical level is concerned. Since remaining workers must be qualified, it follows one would not dismiss a competent head custodian with less seniority than a junior head custodian who was not able to carry out the greater responsibilities of the position.

The existence of such clauses may explain in part why none of the agreements covering secretarial and office staff formally recognize seniority rights by level, even though office staffs tend to be highly stratified.

Seniority by Part- or Full-Time

Almost all of the contracts reviewed recognize the rights of part-time employees to be offered the opportunity to join the staff on a full-time basis if opportunities arise. They also indicate that in such hiring the most senior part-time employee should be given first refusals, assuming the person is competent to fill the position. However, only five of the agreements include the distinction between full- and part-time employees in their definitions of seniority, and require that seniority lists of part-time employees be provided on the same basis as those for full-time employees.

The clause defining seniority in Board #12's agreement is typical of this type:

> Seniority is length of service. The Employer shall maintain two (2) seniority lists, one for full-time and one for part-time employees, showing the date upon which each employee's regular service commenced. Current seniority lists shall be sent to the Union on October 1st and April 1st of each year.

> For the purposes of clarity, part-time employees shall be defined as those employees who are employed for twenty-four hours per week or less. A part-time employee transferring to a full-time position may carry over to a full-time position one-half (½) of the hours worked for each year of part-time employment.

Of particular note in this statement is the relatively low definition of what constitutes full-time employment — namely, more than 24 hours of work per week.

Without probing further, we cannot be certain as to why there is particular consideration of part-time employees in the agreements in question. We would advance the idea that the part-time caretaking and secretarial staffs covered by these agreements may be regular employees in smaller schools where full-time positions are not available. If so, then in their social relationships they may be looked upon as full members of the organizations, and not as transitory individuals without commitments. If this is correct, then clauses relating to part-time staff members may be assuming increasing importance as schools get smaller. This issue appears to be one that merits future investigation.

Seniority Accumulated During Lay Offs

To be laid off is to assume a rather anomalous position. The individual in question can be considered as one who is placed in a transition role. Transition roles are quite common in society; they usually precede a permanent or long term change in status; e.g., engagement before marriage and separation before divorce. During the period of transition, the individual typically has certain rights and responsibilities related to the position being assumed or being left behind. In the case of the person who has been laid off, these responsibilities may entail such matters as keeping the employer aware of their whereabouts; the rights may entail such matters as the one at issue here, the accumulation of additional seniority.

Accumulation of seniority is an important right. Now only may an individual's relative seniority be important in deciding the order of being laid off, but the amount of seniority possessed can determine other benefits, such as length of vacation. Hence, accumulation of seniority during lay off is of value to the employee.

Seven of the agreements studied have clauses or parts of clauses which speak directly to this topic. In two, the individual who is laid off is explicitly denied seniority credit for the entire period of lay off.

Three agreements allow the employee to accumulate an addition of three months of seniority during lay off, and two allow the accumulation of an additional 12 months.

Six contracts make no mention of this matter. We would presume that in these cases no seniority is earned during lay off.

Seniority Accumulated While Transferred

Many of the agreements contain clauses emphasizing that the contract does not cover the selection of individual for promotion to a position outside of the bargaining unit. A few acknowledge the possibility that an individual may transfer out of the bargaining unit for other reasons. Some deny the right of the employer to make such a transfer without the consent of the employee. One, quoted earlier, specifically denied the right of transfer to another seniority group within the unit, but gave generous recall rights should a person have been forced to transfer out of the unit in order to maintain employment. As with lay offs, some contracts include clauses that grant the right to accrue seniority during the time spent in service of the employer but out of the bargaining unit.

Of the 11 agreements which speak to this issue, three allow unlimited accrual of seniority during appointments outside the bargaining unit. It would appear these clauses would encourage members of the bargaining unit to assume supervisory roles outside the unit since, were they to return later, they would have lost no seniority relative to those who originally joined the unit with them. In essence, seniority is with the board rather than the bargaining unit. One agreement placed a limit of six months on the amount of seniority that could be accumulated during assignment to a position outside the bargaining unit. This limit amounts to granting the employee a probationary period in the other position during which they would not fall behind others in the unit in terms of accumulated seniority.

Seven contracts specifically deny additional seniority to individuals who have left the bargaining unit for positions elsewhere in the organization. This policy would seem natural in units which are shrinking in size and where lay offs are threatened. Each departure for another position would reduce the unit's strength by one, and thereby decrease the likelihood that any remaining member of the group will be laid off. On the other hand, it might discourage senior employees from risking promotion to a supervisory position, particularly if seniority in the new position did not recognize their years of previous service.

Two agreements do not mention accrual of seniority during a period of transfer. We would presume that none is earned.

Retention of Seniority During Lay Off

Quite aside from the issue of accruing additional seniority is that of preserving the seniority which one has during a period of being laid off. Eleven of the thirteen agreements recognize a certain period during which an individual who had been laid off has the right to be recalled without loss of previously earned seniority. Other clauses spell out how this process is to be carried out, but the main point is that upon recall the individual has seniority equal to that acquired previously to being laid off.

The period during which an individual may be recalled without loss of seniority is limited. If an individual is rehired after this period is over, he or she must serve a probationary period, and retains no seniority from the earlier period of employment. Clearly, in a time in which lay offs are expected, unemployment rate is high, and attrition rate is low, a long period during which recall is assured and seniority maintained is advantageous to the employee.

Eleven of the thirteen agreements (all union agreements) had a specific period of time named during which the right to recall with full seniority is guaranteed. In eight of these the period is 12 months, in one it is six months, and in the remaining two it is 24 months.

Probation Period

Probationary periods are important as far as seniority is concerned because after the probationary period is over, the employee is granted seniority credit for the period that has been worked. Very long probationary periods, such as found in the agreement with psychologists and attendance counsellors in Board #1, and very short periods such as those with maintenance, operation, and transportation staff in Board #11, may well have other functions related to the ease (or lack of ease) of entry into full membership in the bargaining unit. However, this possibility is beyond the scope of this study.

Overview

As we said earlier, seniority is a complex matter. It can be earned within functional areas or in hierarchical levels; for part-time or full-time employment; for employment outside the bargaining unit while in another position, while on lay off, or, retroactively, during probation. Seniority may or may not be revoked when an individual leaves the bargaining unit, and the decision on this may depend on the reasons for the departure. As a rule, voluntary departures are looked upon with less favour than those forced upon the employee by staff cut backs. Even when full seniority is retained on departure from the unit, there is a time limit attached. If the individual does not rejoin the unit by the end of this period, all seniority is lost. One of the most important roles that seniority plays is that of deciding in what order individuals are to be considered for promotion or for lay off. It is the latter role that we consider next.

CLAUSES RELATED TO LAY OFF AND RECALL

All of the agreements studied had clauses that made reference to the lay off and recall of staff, though only two had entire articles devoted to the topic. Were lay offs always in the reverse order of seniority, and recalls always in the order of seniority, the clauses would be rather straightforward. However, this is not the case. Often, the issue of individual qualifications is involved, a matter which is not necessarily clear cut. Also, when positions in a hierarchical organizational structure are involved, as is the case with caretaking staff, the issue of bumping rights arises. Does a senior person who is displaced have the right to bump any less senior employee from his or her position? This issue of bumping rights also arises when transferees return to a bargaining unit from an appointment outside the unit.

To protect the rights and opportunities of those who have been laid off, contracts often include restrictions on the hiring of new employees while others are still on lay off. And, to ensure that this policy is enforced, some contracts require frequent reports by the board to the union describing all appointments, resignations, etc.

Order of Lay Off

Lay off clauses tend to require either than lay offs be in the reverse order of seniority or that they be in reverse order of seniority taking into account the qualifications of the staff involved. An example of the first type of clause reads:

> In the event of lay off, employees shall be laid off in the reverse order of their seniority.

The second type of clause is more complex:

> In all cases of lay-off and recall after lay-off the following factors shall be considered:
>
> (a) seniority
>
> (b) education, knowledge, and over-all qualifications to perform the normal requirements of the job.
>
> Seniority shall govern where the matters referred to in factor (b) are relatively equal.

Six of the contracts have lay off clauses of the first type; these are indicated in Table 26 by an "S" in the row referring to the order of lay off for each agreement listed. The seven which had the second type of clause, which places additionsl conditions on the order of lay off, are indicated by an "S+".

If there is a dispute as to the judgement that has been made in applying a clause of the second type, it is generally understood that the employee affected may file a grievance in accord with the contract's provisions for grieving. This ensures that the lay off clause is not applied in a capricious or arbitrary way.

Several agreements include clauses that allow grievances arising in the course of lay offs to be initiated at an advanced stage of the grievance process. One clause states, for example that:

> Grievances concerning lay offs due to reduction in the working force shall be initiated at Step 4 of the grievance procedure.

Step 4 of the grievance procedure in this particular contract is the submission of the grievance to the business administrator in the board, who is required to render a decision within five working days. If the decision is not found satisfactory by the grieving party, then the grievance moves to Step 5, which is arbitration. Thus, steps involving the union steward, the immediate supervisor, and department head are all passed over.

In another contract, a grievance arising out of a lay off due to reduction in the working force enters Step 3 of the grievance process, which involves submission of the grievance to a joint meeting between the Union Committee and a Board Committee. The latter includes the director of education, the superintendents of plant and of business and finance, and two trustees. Thereafter, if the grievance remains unresolved, it may go to arbitration.

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While we did not investigate the motivation behind the inclusion of these special grievance procedures in the contracts, we would speculate that a major motivation was the desire for quick decisions. Grievances can be very time consuming, and without prompt decisions, the grievances could remain unresolved on the date lay offs occur. Neither the board nor the union would appear to gain from this type of delay.

Order of Recall

Surprisingly, the order of recall of staff on lay off is not necessarily the simple inverse of the order of lay off. Two contracts which had clauses requiring that lay offs be in the reverse order of seniority had clauses dealing with recall that placed additional conditions on the process. For example:

> Both parties recognize that job security should normally increase in proportion to length of service. Therefore, in the event of a lay-off, employees shall be laid off in reverse order of full-time or part-time seniority. Employees of lay-off shall be recalled in order of seniority provided they are qualified to do the work.

To some extent, this combination of clauses would seem to provide somewhat greater protection to those still on staff than to those on lay off since in laying an individual off only seniority would be considered, whereas both seniority and qualifications would be considered when recalls were made.

Bumping Procedures on Lay Off

When the reduction in staff positions in an organization includes positions occupied by senior staff, an occurence particularly common when jobs are arrayed in a hierarchy, the reassignment or lay off of the incumbents presents a particularly difficult problem. Ought these senior staff be laid off, or should they displace of "bump" other individuals with lesser seniority? If a senior staff member is laid off, the total impact of the reduction in force falls on this one individual; if bumping occurs, it is spread across a large number. Yet in both cases, the loss to the bargaining unit is the same, so it is difficult to say which option is preferable. Perhaps it is for this reason that a number of different and opposing clauses are found in various contracts.

Seven of the 13 contracts studied have clauses that deal with the issue of bumping on lay off. Of these seven, two specifically deny bumping rights, while five guarantee them. The complexity of the arrangement in Board #1's agreement with its caretaking staff, an agreement that recognizes both Board and Code Seniority, is of particular interest:

> In the event of a layoff or recall to work following layoff in any Code, then the Code Seniority shall be the governing factor subject to the following:
>
> (a) A senior head caretaker can displace a junior head caretaker or an assistant caretaker who is junior in service and for the purpose of the subclause, Board Seniority applies.
>
> (b) A junior employee who possesses an Engineer's Certificate shall not be laid off, if the work remaining to be done requires an employee with an Engineer's Certificate and there are not a sufficient number of senior employees with Engineer's Certificates to perform that work. In such a case, the most junior employee or employees who do not possess Engineer's Certificates shall be laid off.

In essence, this clause allows a head caretaker with a given level of seniority to bump another caretaker if the latter has less seniority and does not hold an Engineer's Certificate. This clause does not specify which employee with less seniority is to be displaced, so that either one or many other employees might be affected. If the clause were applied in full, then no head caretaker would be laid off; the burden of being laid off would ultimately fall on assistant caretakers without Engineer's Certificates.

The bumping policy in another board is even more general in its application:

> In the event a school or building is phased out by the Board the following procedure shall apply: Seniority rights prevail.
>
> Every effort will be made by the parties to relocate displaced employees in acceptable positions. Failing this, all positions shall be declared vacant and shall be posted.

Unlike the first clause, which would not give bumping rights to assistant caretakers, this clause gives bumping rights to all employees except the most junior. If this clause were in fact applied, one could expect that each employee would be bumped downward one step since seniority would be the guiding principle in the reassignment of staff. In practice, we would hazard the guess that this clause acts as a deterrent to the elimination of positions and to the assignment of positions to displaced staff members in an arbitrary manner.

A third contract's bumping clause seems to offer still more protection to senior employees than either of the two preceding examples:

> An employee with seniority in the bargaining unit whose job is permanently affected by way of being discontinued or changed in a manner that will reduce the employee's rate of pay or regular hours of work may if he chooses, displace an employee with lesser seniority in any classification covered by this agreement provided he has the necessary qualifications. Other employees who are affected by such a move shall be allowed to exercise their seniority rights in the same manner. Any employee displaced will be notified by the Personnel Manager with information as to his rights under this clause. In the event an employee is unable to find a suitable position due to being displaced he shall be considered laid off.

Under this clause, a head custodian of a school whose decline in enrolment has caused a decrease in the classification of the school, and hence the caretaker's rate of pay, could displace a less senior custodian in another school where enrolments had not declined.

In contrast to the extensive bumping rights that are assured in the preceding three clauses, no such rights are allotted under the following clause, which is taken from the contract for secretarial and clerical staff in the board from which the second example above was selected.

> It is agreed and understood that seniority shall not be used to displace employees from present positions, but shall be recognized by the Board in job posting and lay off situations.

Hence, if a school in this board were closed the displaced caretakers would have the right to bump those in other schools with less seniority, but the secretarial staff would be laid off unless vacancies occurred elsewhere in the system. However, the bumping clause for secretaries and clerks does imply that if it was necessary to eliminate some positions, those filled by junior staff would be eliminated first, if possible, in order to avoid the lay off of senior staff.

In the eight boards in the sample which will actually have shortages of staff in the coming ten years, it would appear that the necessity to bump staff can be avoided if careful planning is undertaken and boards and unions work together. In the boards that expect surplus staff, the problems can be minimized if long term plans are made so that employees know well in advance when their turns for lay off are likely to come. In the meantime, they can be assisted in looking for other positions and retraining. Or, perhaps inter-board agreements can be negotiated so that displaced individuals can move to positions in boards which have a need for new members. One of the major difficulties in the latter approach may be the loss of seniority that individuals would incur in moving from a bargaining unit in one board to a bargaining unit in another. Given this situation, however, one would hope this problem could be resolved.

Bumping on Return from Transfer

Closely related to the issue of bumping rights in situations involving lay offs is that of bumping rights on return from a transfer to another position outside of a given bargaining unit. For this purpose, transfers fall into two categories — voluntary and forced. Voluntary transfers are most commonly made when an individual applies for and is awarded a supervisory position outside the unit in question, although voluntary transfers may be made for other reasons as well.

Forced transfers occur when an individual is faced with the choice of lay off or transfer to another position in the board that is not in the same bargaining unit.

Of the seven agreements having clauses that addressed the issue of transfers outside of the bargaining unit, two allowed the displacement of less senior members of the bargaining unit as the result of the transfer of an individual back into the unit after having served outside the unit on a voluntary basis. A typical clause covering this situation reads as follows:

> No employee shall be transferred to a position outside the bargaining unit without his consent. If an employee is transferred to a position outside the bargaining unit, he shall retain his seniority acquired at the date of leaving the Unit, but will not accumulate any further seniority. If such an employee later returns to the bargaining unit, he shall be placed in a job consistent with his seniority. Such return shall not result in the lay-off or bumping of an employee holding greater seniority.

We take the prohibition that no employee with greater seniority may be bumped as permitting the bumping of employees with less seniority.

The agreements that prohibit a returning transferee from bumping another member of the bargaining unit are quite similar, but lack the closing phrase of the preceding clause. For example, one agreement includes the following clause:

> The selection and promotion of employees to positions outside the bargaining unit is not governed by the Agreement. In the event an employee accepts or has

> accepted any such position he shall retain his seniority rights if such employee is later returned to a position within the bargaining unit, he shall be placed in a job consistent with his qualifications and seniority and shall be credited with the seniority which he has accumulated in such position provided, however, that no bargaining unit employee shall be displaced or laid off as a result of such placement.

An agreement with a clause such as this would certainly discourage employees from taking the risk of seeking supervisory positions outside the unit. For all practical purposes, leaving the unit voluntarily places an individual in the position of effectively resigning his or her position, though seniority rights would be preserved.

None of the agreements reviewed recognized the right of an employee who had been forced to transfer out of the unit in order to maintain employment to bump another member of the unit in order to return. This is natural, since the individual would not have transferred in the first place had there been a position open or had it been possible to bump another person in the unit.

Recall Rights During Forced Transfers

As we noted earlier, one board agreement recognized the right of an individual who had been forced to transfer in order to maintain employment with the board to be recalled to the unit if a vacancy occurred. The recall rights were quite generous, applying for 30 months from the time of transfer, though they could be invoked just once during an individual's employment with the board.

A clause of this type would appear to enhance the job security of the employee, while increasing the board's flexibility in staffing positions in various units.

Frequency of Seniority and Employment Lists

All contracts provided by the sample board included clauses requiring the boards to supply seniority lists on one or more occasions during the year. The most demanding was that in Board #11:

> In January of each year, the Employer will provide to the Union a list of all employees in the bargaining unit showing names, classifications, and dates of hiring. Once a month during the year, the Employer shall provide the Union with an up-to-date list of hirings, resignations, firings, layoffs, and retirements.

The major purpose of these lists is no doubt simply to provide the union with a list of its members and to ensure each individual employee is aware of his or her seniority. The latter is important in preventing disputes on matters in which seniority is important, such as promotions, lay offs and vacations. At the same time, the monthly up-dates required in this clause also ensures that no vacancies are filled without the full knowledge of the bargaining unit, something that could occur if lists were infrequent.

Summary

Clauses designed to provide regulations governing the lay off and recall of staff can provide a framework for the orderly reduction of staff. They cannot save jobs, but they can indicate who in a bargaining unit will feel the impact of the reduction in working force. It may be a few, if there are no bumping rights and the person laid off is the person whose position has been eliminated. Or, it may be many, if bumping rights are used to spread the loss across all those in a bargaining unit with seniority less than that of the incumbent whose position has been eliminated. Clauses governing the bumping rights of employees who have taken voluntary transfers may affect the willingness of people to apply for positions outside of the bargaining unit. They would tend to decrease mobility of staff among different departments and units in the board. On the other hand, ensuring recall rights to those who are forced to transfer in order to remain employed might foster such exchange. To monitor these staff changes, all agreements require at least annual reports from the employer to the bargaining units on the unit's members and their seniority.

RIGHTS AND BENEFITS

How can an employee lose his or her seniority? And, on lay off, what rights and benefits does the employee retain? We have already considered, in an earlier section, the retention of seniority rights during lay off; in this section we consider the loss of these rights, and the loss of benefits granted in the contracts.

Loss of Seniority

Since seniority is a currency of high value to the employees, affecting as it does their job security and job opportunities, its loss could be devastating. All contracts have clauses outlining the conditions under which seniority can be lost. Board #11 has an unusually detailed clause:

> Seniority rights of an employee may only be terminated for the following reasons: - if
>
> i) the employee resigns;
>
> ii) the employee is discharged and not reinstated through grievance or arbitration procedures;
>
> iii) the employee fails to return from leave of absence, unless such failue to return is proven to the satisfaction of the Employer to have been due to causes beyond the employee's control;
>
> iv) the employee is absent from work in excess of two (2) working days without sufficient cause and without notifying the Employer, unless such notice was not reasonably possible;
>
> v) The employee fails to report after a lay-off within fourteen (14) calendar days after having received notice of recall by registered mail to the last address of the employee which the Employer has on record, unless such failuse is proven to the satisfaction of the Employer to be due to causes beyond the employee's control. An employee is responsible for advising the Employer in writing of his address from time to time while he is on lay-off, and non-receipt of the notice of recall due to failure on the employee's part to keep the Employer up to date on his address will not be deemed to be a cause beyond the employee's control for his failure to return to work pursuant to this paragraph;
>
> vi) The employee is laid off for a period of twelve (12) consecutive months;
>
> vii) The employee retires;
>
> viii) The employee is retired at the regular retirement age.

Being absent without leave or failing to respond to a recall notice are the two methods of losing seniority that could trap the careless or unwary employee. By invoking the first, the employer can terminate the employment of any staff member who is sufficiently undependable, and by invoking the second the employer can end all obligations to a former employee who does not respond with dispatch to a recall notice.

In the clause cited, the limits placed on the number of days one could be absent without leave is set at two and the limit on the number of days in which a former employee has to respond to a recall notice is set at 14. In most boards, these limits are three and seven days, respectively. One board, however, has no minimum number of days for absence without leave; all absences require "a bona fide reason acceptable to the Board."

Retention of Benefits During Lay Off

Only two boards in the sample have clauses in their contracts with non-certificated staff that provide for the continuation of employee benefits during lay offs. Only one month's continuation is provided in one of these, but the other provides for the continuation of benefits up to one year:

> The Employer agrees to continue the full coverage to the Hospital and Medical Plans for employees laid off for periods of less than one (1) year provided the employee repays his portion of the premium upon his return to work and provided the employee is not gainfully employed in a full-time position elsewhere. In the event of a long lay-off, employees so affected will be given the right to continue their coverage through direct payments of 100% premiums.

CONTRACTING OUT

Most of the services provided by maintenance, operations, and transportation personnel in school boards could be contracted out to private companies. This fact is perhaps a greater threat to the continued employment of many of the non-certificated staff in Ontario than the fact of declining enrolments. Quite aside from the financial stringencies brought about by the existence of fewer children, boards in Ontario have had to cut back in spending because revenue has not increased as rapidly as costs. As a result, some have turned to contract services which, as we have noted previously, are reportedly less expensive and of lesser quality.

One response to the threat has been the introduction of clauses in contracts which prevent boards from dismissing staff and replacing their services with outside contracts. Because this issue is of paramount importance, we quote all five articles in full.

Board #3's agreement with their clerical staff reads as follows:

> The Board shall not contract out work that is normally performed by bargaining unit employees, except in emergency situations, if this would result in a lessening of regular or overtime hours for any employee

> covered by this Agreement. However, if an employee covered by this Agreement refuses overtime, for that occasion the Board may have the work done by other means.

The article for Board #6 reads,

> The Employer agrees that no employee on staff with two (2) or more years seniority shall be laid off or have his employment terminated as the result of any work now being performed by the Employer being subcontracted, transferred, leased, assigned or conveyed in whole or in part to any other plant, person, company or non-unit employee.

The article for Board #7 is as follows:

> It is agreed that for the term of this Agreement there shall be no restriction on contracting out by the Board of their work or services of a kind now performed by employees herein represented; provided, however, that no permanent employee of the Employer shall, as a result of such contracting out, thereby lose employment with the Board.

Board #11's agreement with its maintenance, operations, and transportation staff is more like that of Board #6.

> The Employer agrees that no employee hired on or before May 6, 1977 who has two (2) years of seniority or more will be laid off or have his or her normal hours of work reduced as a result of the contracting out of part of the Employer's operations. Employees whose duties are affected by contracting out shall not suffer any loss of salary.
>
> The Employer agrees that any furtherance of contracting out of work relative to the transportation of students, currently being performed by employees in the bargaining unit, shall only be as a result of normal attrition due to retirements, resignations or other terminations of employees.

The final agreement, that for Board #12, is the only agreement which specifically guarantees a specific number of positions for the bargaining unit.

> While the Board reserves the right to contract out custodial services, this will not effect the employment of those members of Local . . . who are in the employ of [Board #12] on date of signing this Agreement. The Board agrees to maintain a Custodial Staff of at least twenty-three (23) employees. The Board further agrees that no permanent employee will be involuntarily relocated more than nine (9) miles from his residence or his normal reporting base as a direct result of "Contracting Out of Custodial Services."

The objective of preserving jobs comes across very clearly in the last four of these articles, while the first appears more concerned with the right to overtime.

CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

This study has been directed at answering four questions which were stated in the first chapter. They were as follows.

1. What are acceptable standards for the numbers of non-certificated staff employed by school boards of a given kind and size?
2. What will be the demand for non-certificated staff in the coming ten years, given that most school boards are becoming smaller?
3. What is the supply of non-certificated staff currently available in school boards, and how does this supply conform to future demand?
4. Given answers to the three questions above, what are the implications for the province, for school boards, and for individual employees?

We have tried to answer these questions in detail in the preceding chapters; we now provide a brief summary of these answers and consider them from the perspective of two organizations that represent non-certificated staff. We conclude with a set of recommendations that address some of the problems that have been identified.

CONCLUSIONS

Staffing Standards

Using a normative approach to the determination of standards, we have concluded that current staffing patterns in Ontario schools boards are reasonable. This conclusion was based upon the finding that the major changes in staffing patterns in the past eight years was a growing equalization of services among boards rather than an uncontrolled increase in the number of employees in all boards. Small county boards, northern district boards and separate school boards have been the major beneficiaries of this equalization, while staff ratios have remained unchanged or declined slightly in other boards.

In terms of specifics, we identified the ranges from 25 to 37 non-certificated staff per 100 certificated staff and 1.3 to 2.0 non-certificated staff per 100 students as being acceptable. Ratios in county and separate school boards would probably be near the lower end of these ranges, while those in large urban and northern districts would probably be near the upper end. We expect that these ranges are sufficiently generous to accommodate fluctuations in ratios from year to year, even as enrolments decline.

Demand for Non-Certificated Staff

We have projected a decline in demand for non-certificated staff that is proportionate to the decline in enrolment. Though it can be argued that decline in demand lags begind a decline in enrolment because a board's fixed costs do not decrease as quickly as its enrolments do, we believe fiscal pressures on boards will eliminate this lag.

For Ontario as a whole, the number of non-certificated staff will decline from about 31,700 in 1976 to about 22,700 in 1986. In individual boards the decline may be as great as 30%, though in some boards enrolment and hence demand for non-certificated staff will increase.

Balance of Supply and Demand

Assuming that demand for non-certificated staff will fall as enrolments fall facilitated the analysis of the balance between supply and demand, where supply was defined in terms of only those non-certificated staff currently working in school boards minus those leaving through attrition. This analysis involved computation of projected non-certificated staff to student ratios for the next ten years. Any decline from the 1977 ratio meant that a shortage of staff existed and any increase above that ratio meant that there was a surplus.

Seven of the twelve sample boards investigated face a shortage of staff in the coming years and will be in a position to hire new staff, assuming they choose to maintain their current staff to student ratios. The remaining five boards will experience a surplus of staff, three after a brief period of shortage and two immediately. One of the latter will see its surplus decline after a few years as the decline in enrolment levels off. The other board will have a surplus of staff for the foreseeable future.

The possibility that some boards may turn to the contracting out of services in order to save money was identified as a major uncertainty affecting non-certificated employees. Much of maintenance, operations, transportation, and even psychological services could be contracted out. If this occurred, there would be an artificially created surplus of non-certificated employees who might then be laid off.

Implications

On a province-wide basis, the outlook for non-certificated staff is good, assuming the practice of contracting out for services does not become widespread. Overall, there will be a slight demand for new non-certificated staff. Any boards with surplus staff could avoid lay offs if inter-board transfers of staff could be arranged.

If individual boards do plan well, it appears lay off can, as a rule, be avoided. In some boards, the use of outside contracts for services for short periods of time when there is a shortage of internal staff may help to avoid lay offs in the future when attrition is not expected to be sufficient to reduce the numbers of employees as quickly as the numbers of students decline.

Most individual employees who are in bargaining units can give themselves adequate protection against lay offs by bargaining for appropriate clauses regarding the contracting out of services in their contracts. Those in boards where lay offs are likely might consider negotiating transfer rights and extra benefits during period of lay off. If, as predicted, the number of part-time employees increases due to the elimination of full-time positions as secretaries and custodians in small schools, then seeking full benefits for part-time employees, including pension rights, may be advisable.

The interests of a large number of non-certificated employees are well expressed by members of their representative organizations.

VIEWPOINTS

Interviews were conducted with representatives of two organizations which have province-wide responsibilities for two very different segments of the non-certificated staff in Ontario school boards. These organizations are the Canadian Union of Public Employees (CUPE) and the Ontario Psychological Association (OPA). The interviews focused upon a number of their concerns. The following statement and interpretation of these concerns, it should be noted, are those of the principal investigator, and not those of the organizations in question.

Canadian Union of Public Employees

CUPE appears to accept the fact that opportunities for employment for non-certificated staff are going to decline as a result of the decline in enrolments. However, they do not want to see these opportunities decline more rapidly than does enrolment, a possibility that could occur should boards decide to reduce staffing ratios below current levels and to contract out for services on a large scale.

CUPE's interests, or more properly the interests of non-certificated staff members in school boards, are obviously not served by reduction in ratios or contracting out for services. This accounts for the inclusion of clauses in contracts which restrict the right of boards to contract out and which guarantee a certain number of positions. It is not clear what the relative benefits are for the educational system and society as a whole as far as contracting out is concerned. To determine this, the following questions would have to be answered:

- How much is saved in dollar terms by contracting out for services?
- What are the hidden costs to the board of contracted services in terms of less effective services?
- What is lost to a school, the children, and the faculty, if regular caretakers, bus drivers, etc. are replaced by outside staff?
- Are funds saved by a board in contracting out for services displaced onto some other government agency in the form of increased unemployment payments, etc.?

The third question is particularly interesting since there is little research on the role of caretakers, yet there is much folklore among teachers on the importance of the caretaker in the school's operation. A draft prepared by CUPE in opposition to a proposal to twin schools for caretaking services touches upon this matter:

> During the course of a day, many routine functions are performed by the caretaker in a school, functions that cannot be left for half a day. Hallways and stairways must be kept clean and unobstructed. Snow cannot be

> allowed to melt and lie on the floor for hours but must be cleaned up immediately, particularly in schools with broadloom. Washrooms must be continuously checked to ensure that toilets are flushed and dispensers full of towels and toilet paper. If not, the washrooms smell and we have a situation such as in one school where the caretaker has already been called back seven times to fill dispensers that were full when he left. Because the caretaker is continually on the move about the school, he often meets up with strangers in the building. If the person has business in the school the caretaker will escort him to the office and if the person should not be in the school then the caretaker would ask him to leave.
>
> [Caretakers take] pride in [their] work . . . [which is] reflected in the condition of your schools. A caretaker never refers to his place of employment as being "the school where I work" but rather it is "my school."

Anyone who has taught in a school is aware of the validity of these arguments. Caretakers, school secretaries, and often school bus drivers form a part of the school community. Often, these non-certificated staff members are the school's strongest link to the local community. Their backgrounds are often more similar to those of the students than are those of the teachers, and they can be called upon to interpret the school to the community. The expedient answer to financial difficulties may be to contract out services, but it appears doubtful to us that the long-term costs are being fully considered.

A second concern facing CUPE is the number of small bargaining units that have been formed. That for Board #12, recall, dealt with just 23 custodians. One solution would be province-wide bargaining as has been adopted in the Colleges of Applied Arts and Technology for negotiating the salaries of their teaching staffs. Such an approach would have considerable amounts of administrative time at all levels, and would facilitate inter-board transfers. On the other hand, it would remove fiscal control from the local boards which serve as a decentralized system of fiscal control that adjusts the price paid for services to the local costs and that determines the quality of service demanded by local tastes.

A third issue confronting many CUPE locals is the aging of their staff as the hiring of new employees declines. Not all types of work require younger men and women, but many maintenance and caretaking activities do. The problems raised by aging are recognized in many contracts, which have clauses such as the following:

> Any employee covered by this Agreement who has given good and faithful service to the Employer and who through advancing years or temporary disablement is

> unable to perform his regular duties shall be given the preference of any light work available at the salary payable at the time for the position to which he is assigned.

That the staff would age if no new hiring occurs is obvious. However, the majority of individuals who might have to change to lighter work would probably be in the 55-65 year age group. To see how the age distribution in this range will change, we computed the percentage of all non-certificated employees in the twelve sample boards between 55 and 65 years of age. In the total sample, the percentage ranged from a low of 21.9% in 1978 to a high of 27.5% in 1987. There was considerable variation among boards, however. In Board #1, the percentages ranged from 25.5% in 1978 to 34.0% in 1987, while in Board #8 the change was from 12.5% to 16.8%. As a rule, then, CUPE's concern for an aging workforce appears valid, though not for all boards.

A final concern which was not raised in interviews with CUPE officials but which we identified in our work was a likely increase in the numbers of part-time positions in schools that are becoming too small to justify full-time caretakers and secretaries. A large percentage of these individuals may not be entitled to benefits such as pensions. Indeed, the lack of membership in the Ontario Municipal Employees' Retirement system was identified earlier. What does the future hold in store for these employees? For the part-time secretarial staff, it could be bleak, as suggested by a recent study called *Women and Aging: A Report on the Rest of Our Lives*, released by the Federal Advisory Council on the Status of Women (*Globe and Mail*, April 6, 1978):

> The older divorced, separated or widowed woman faces disadvantages in the labor market
>
> They are less prepared for their retirement years than men, while society stereotypes them as either "a dear old soul" or "that old woman."
>
> Most older married women are financially vulnerable, and if they're not 65 yet, they face the prospect that their spouse's allowance will be discontinued if the pensioner-husband dies before they reach 65.
>
> "Their poverty is not the result of an accident. . . . Women are poor in old age because most of them have devoted their lives without pay to their husbands and families and were led to believe that if anything happened, they would be taken care of."
>
> As well, the report says, "Socialized to believe that they need little or no education and training, women end up working for low pay at subservient jobs that do not give access to pensions."

It would appear that there are a large number of women working in part-time positions in school boards who may find that they will experience this type of poverty in their old age for the very reasons that are described. It may be that boards and unions would take the interests of these and other part-time workers into account in as full a manner as they do those of full-time workers.

Ontario Psychological Association

There are two bodies that are central to the psychological profession in Ontario, the Ontario Psychological Association and the Ontario Board of Examiners in Psychology. The first is the psychologists' professional association, and the second is a board created under the Psychologists Registration Act of Ontario. The latter administers examinations which are required for a psychologist to become a "registered psychologist" in Ontario. It also regulates the practice of registered psychologists.

One major area of concern expressed by various registered psychologists with whom we spoke was the fear that economic stringencies brought about by declining enrolments and grants would threaten their employment in school boards.

As background for the discussion of this issue, the results of a survey conducted by the Ontario Board of Examiners in Psychology provides a helpful profile of the positions of registered psychologists in Ontario.

In April 1977 the Board sent questionnaires to the 742 psychologists then registered, about 710 of whom responded. The questionnaire contained questions about their major areas of interest, the types of practice they were involved in, and their professional orientations.

Sixty percent of the respondents indicated that their primary interest was clinical, three percent developmental, thirteen percent educational, seven percent industrial, and two percent social. In their work, twelve percent worked primarily with children, forty percent with adults, and forty-five percent with both. Of those working in an educational setting, 109, or sixteen percent, of all registered psychologists, worked in elementary or secondary education, while 262, or twenty-three percent, worked in a post-secondary environment.

One of the reasons that many psychologists working in school systems may be concerned about their positions is the fact that their lack of teaching certificates leaves them out of the educational fold. For example, they see themselves as having an important role in maintaining professional standards in areas such as the diagnostic and treatment of problems of children who require special education. Yet, they are not counted in the formula used by the Ministry of Education to determine a school board's weighting factor for special education, even though special education teachers and lay assistants are.

We are not able to assess the role that registered psychologists play in school boards. We do not know if they are more or less effective in diagnosing and treating children with learning and behavioural difficulties than are specially trained teachers who are not registered psychologists. We would venture that individuals with both qualifications would be most effective.

We do believe that it would be an error to assume that the number of psychological problems children face will decline with declining enrolments. There are several trends over the last ten or fifteen years that make us doubt this. There is evidence, for example, that the higher retention rates in secondary schools have meant the retention of more students with severe psychological problems, students that in previous decades would have left the school system. Also, there is evidence that the rising suicide rate among adolescents and young adults reflects greater problems among youth in developing successful lives in society. School boards, in considering their own system's needs, should provide services that address these problems. Whether the persons employed to do this are primarily the members of one profession rather than another is perhaps a secondary issue.

RECOMMENDATIONS

In view of the findings of this study and the views expressed by individuals in school boards and in the organizations which speak for non-certificated staff, we have derived three sets of recommendations. These recommendations are, for the most part, substantial and are meant to stimulate debate on the issues we have identified. The three categories dealt with are legislative grants, agreements between school boards and staff unions or associations, and future studies.

Legislative Grants

Without doubt, the Ontario system of provincial grants to education has worked extremely well in recent years. It has been particularly effective at equalizing the levels of service provided in different boards. Nevertheless, there are changes that could be made in the system that would be of assistance in resolving some of the problems identified in this study. We have four specific recommendations. The first deals with the time lag that occurs between the time a student leaves a school system and the time the system can reduce expenditures proportionately, the second with the employment of registered psychologists in school boards, the third with inequalities in the tax bases of different boards, and the fourth with the lack of long term financial planning for elementary and secondary education in Ontario.

Time Lag

There is very good evidence that there is a time lag between the time enrolment drops in a board and the time the board can cut its expenditure proportionately. To ease this transition, we recommend

> *that the weighting factor for declining enrolments previously used in Ontario be reintroduced.*

Registered Psychologists

The current grant weighting factor for special education encourages school boards to replace registered psychologists with special education teachers and lay assistants, because the latter two groups are counted in the weighting factor. We consider such steering effects that reward a board for staffing a program in one way rather than another to be inappropriate. Grant formulae should be neutral, unless the intention is for one program to be stimulated. Therefore, we recommend

> *that registered psychologists assigned in whole or in part to work in special education programs be counted in the weighting factor for special education in proportion to their involvement in the programs.*

Long Term Financial Commitment

Many problems of adjustment to the fact of declining enrolments are complicated by the uncertainty from one year to the next about the amount of funds a board will receive from the provincial government. Even minor tinkering with the grant system can result in fluctuations of hundreds of thousands of dollars. Therefore, we recommend

> a) *that the government commit itself to announcing grants by November 31st, and*

b) *that changes in the grant allocation formula be announced one year in advance, so that boards can plan for their financial impact.*

Recapture of Property Tax

Boards with low assessed valuation are at a tremendous disadvantage in comparison to wealthier boards if they wish to spend over the grant ceiling for recognized ordinary expenditure. And, if they have declining enrolments, they suffer from the fact that any savings that occur because of the decline accrue to the province as a whole rather than to them. Therefore, we recommend

a) *that a proportion of the revenue generated by boards with greater than average wealth for the purpose of spending over the grant ceilings be recaptured by the province for allocation to boards with less than average wealth that also wish to spend over the ceilings, and*

b) *that boards with less than average wealth that are experiencing declining enrolments have their per pupil assessed valuation lagged for two years for grant purposes so that they can benefit financially from the decline in enrolments.*

Collective Agreements

For the most part, issues raised in the negotiation of contracts should be settled by the bargaining process. But the arena in which bargaining takes place is determined by provincial legislation and regulation. We were struck by two characteristics exhibited by a number of the contracts examined which seem to relate to the framework within which the negotiations took place. First, many of the agreements involved extremely small bargaining units, and second, there were often several bargaining units for each board.

Too many small bargaining units clearly creates a heavy administrative load on the boards, on the units, and on CUPE. Within the same board, a number of bargaining units may hinder intra-board transfers that are necessary in order to ensure continued employment for all current staff. We cannot expect attrition to be evenly distributed across all units any more than we could expect it to be evenly distributed across all boards.

Therefore, we recommend

a) *that agreements with non-certificated staff be negotiated on a regional basis, where the regions are the six defined by the Ministry of Education, or*

b) *that there be two bargaining units in each board, one for secretarial and clerical staff, lay assistants, attendance counselors, audio-visual technicians, and psychologists, and one for maintenance, operations, transportation, and cafeteria personnel, except in the five defined cities and boards enrolling fewer than 2,500 students. In the first case, there shall be no limit to the number of bargaining units; in the second, there should be a single bargaining unit.*

We would also urge that part-time employees be assured the same pension opportunities as full-time employees, but consider such a recommendation to be a matter for negotiation rather than regulation or legislation.

Future Studies

All of the preceding recommendations have to be studied in detail to ascertain whether the evidence at hand is sufficiently valid to justify such action. But in addition to this, there are several other matters that should be investigated further, one dealing with the role of caretakers and psychologists, and the other with the staffing patterns used in secondary schools.

Role Studies

In order to determine the loss that would be incurred should caretaking and psychological services be contracted out, it is important to discover all aspects of the social roles played by these individuals in our schools. We recommend

that several case studies be undertaken in order to determine these roles, with special emphasis being placed on their informal contributions to the educational system.

Secondary School Staffing

There has not been, to date, a detailed study of the staffing and costs associated with the operation of secondary schools that is comparable to that on elementary schools done by Rideout (1977). Therefore we recommend

> *that a study be undertaken on the costs of operating secondary schools of various types, and that these results be compared with those for elementary schools. We also recommend that the findings from these studies be related to the allocation formulae used to allocate non-certificated staff to schools that are reported in this study.*

Closing Remarks

In the public eye, the educational system consists of the teacher and the principal. They often forget that the work these individuals do would not be possible without the strong support services provided by the school's non-certificated staff. It would be unfortunate if the contribution these individuals make is forgotten, and society forces them to bear a disproportionate share of the difficulties caused by declining enrolments.

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APPENDICES

APPENDIX A

June Board Report for 1977 - Directions

Appendix A

PAGE TYPE 1

SECTION A - IDENTIFICATION

These data are used to update Ministry Records, Mailing Lists, the Directory of Education, and the Directory of School Boards.

Check the preprinting for accuracy, making changes where applicable.

Line 007 - Enter the name and degrees of the Secretary only if different from the Director or the Senior Business official.

Line 009 - Update the Board Auditor's Municipal Licence No.

SECTION B - TECHNICAL TEACHERS AT THE SECONDARY LEVEL

Statistics gathered here are used in determining the grant weighting factors for high-cost classes as well as indicating the distribution of technical teachers using English and French.

Do not include supervisory officers, co-ordinators, consultants or other personnel who are not in regular contact with students.

If a teacher has other teaching duties, only that portion of his or her time teaching technical courses should be converted to full-time equivalents. Teachers teaching both technical and occupational courses should be pro-rated between this section and section M, page type 8.

A technical course is defined as a shop-oriented course with a low pupil-teacher ratio for other than Occupational Education students. It does not include Marketing and Merchandising courses, Home Economics or Industrial Arts or Business Education courses such as Typing and Shorthand.

SECTION C - PERSONNEL ATTACHED TO BOARD AND SCHOOLS

The purpose of this section is to determine the number of personnel employed by the board as of April 30, 1977.

Report all personnel on the board's payroll and budgeted to the day school program. Exclude all personnel whose remuneration is in the form of fees or contractual services, and personnel related to courses that are outside the day school program such as driver training, adult education, evening and summer school courses.

The number of personnel is to be given in full-time equivalents to one decimal place. Full-time equivalents are to be determined, in the case of teaching personnel, by using 25 or more instructional hours as a 5-day week and for all other personnel, by using 35 or more hours as a 5-day week. A person should never exceed the full-time equivalent of 1.0.

Supervisory Officers

Include Directors, Superintendents, etc. appointed under the provisions of sections 244, 245, 246, and 248 of the Education Act, 1974 and Ontario Regulation 140/75.

Consultant Staff

Include consultants, co-ordinators and other qualified teachers employed in a similar capacity.

Principals, Vice-Principals and Teachers

Enter teachers on assignments not regularly scheduled in specific schools in line 003. In the case of teachers spending part of their time in central office and part in the schools, report the portion of their time that is regularly scheduled in specific schools in line 004, and the remainder in line 003. Supply teachers hired on a regular teaching contract for the school year should be included on lines 003 or 004 as the case may be.

Other Professional Staff

Include personnel with professional qualifications providing educational services to the students. Do not include personnel hired on a teaching contract (they are to be reported in lines 002, 003 or 004).

Report the personnel under the category that most closely fits the groupings provided. For example, psychologists, psychometricians, and psychometrists should be reported under "psychological", and speech therapists and speech pathologists should be reported under "speech".

Para-professionals

Report the number of para-professionals attached to schools and central office. Do not include personnel not paid by the board (such as volunteer teacher-aides). Include paid teacher-aides working in Special Education. An Education Resource Technician assists teaching or counselling staff in preparation and cataloguing of teaching materials.

Clerical and Secretarial

Report office support staff such as clerks, secretaries, keypunch operators, etc. Include clerical and secretarial staff providing office assistance to the teaching and education service functions.

Other Staff on the Board's Payroll

Include all supervisory, administrative, technical and specialized staff not reported in sub-sections 1 to 6. Report the personnel under the category that most closely fits their area of major responsibility. For example, administrators with responsibility in several areas such as instruction, plant operation and transportation may be reported 100% under "Business Administration" rather than according to the portion of their time spent in each area. Reference may be made to the Uniform Code of Accounts.

Do not include personnel whose remuneration is in the form of fees or contractual services. For example, do not include bus drivers whose services are contracted from other agencies.

Ontario
of
Education

Projected as of September 30, 1977 except where otherwise noted

WORKSHEET

Distribution: Board - Retain Green Copy
- Forward remainder of set to Regional Director

Appendix A

PAGE TYPE 1

A. IDENTIFICATION (Please complete or correct identification data in the space directly below computer printout)

001 BOARD

002 MAILING ADDRESS – INCLUDING POSTAL CODE

003 ADDRESS – ACTUAL LOCATION (where different from mailing address)

004 TELEPHONE NO. (Include Area Code)

005 BOARD CHAIRMAN/DEGREES

006 DIRECTOR, TITLE/DEGREES

007 SECRETARY OF BOARD/DEGREES (if other than the Director)

008 SENIOR BUSINESS OFFICIAL, TITLE/DEGREES

009 BOARD AUDITOR
Name

Address

MUNICIPAL LICENCE NO.

B. TECHNICAL TEACHERS AT THE SECONDARY LEVEL

(Full-time equivalent as of April 30, 1977)

		Full-Time Equivalent	
		Eng.	Fr.
001	Teachers Teaching Technical Courses (shop oriented)	0	0

C. PERSONNEL ATTACHED TO BOARD AND SCHOOLS

Full-time equivalent as of April 30, 1977.
Budgeted to the Day School Program.

		Elementary		Secondary	
		English	French	English	French
001	Supervisory Officers	0	0	0	0
002	Consultant Staff	0	0	0	0
	PRINCIPALS, VICE-PRINCIPALS AND TEACHERS (certified and not included above)				
003	Attached to central office	0	0	0	0
004	Attached to schools	0	0	0	0
	OTHER PROFESSIONAL STAFF (non teaching) Providing Educational Services				
005	Psychological	0	0	0	0
006	Psychiatric	0	0	0	0
007	Speech	0	0	0	0
008	Social Work	0	0	0	0
009	Attendance Counselling	0	0	0	0
010	Library	0	0	0	0
011	Guidance	0	0	0	0
012	Other (specify)	0	0	0	0
013		0	0	0	0

		Elementary		Secondary	
		English	French	English	French
	PARA-PROFESSIONALS				
014	Paid teacher-aides	0	0	0	0
015	Audio-visual technicians	0	0	0	0
016	Laboratory technicians	0	0	0	0
017	Education Resource technicians	0	0	0	0
018	Other (specify)	0	0	0	0
	CLERICAL & SECRETARIAL				
019	Attached to central office	0	0	0	0
020	Attached to schools	0	0	0	0
	OTHER STAFF ON BOARD'S PAYROLL (not included above)				
021	Business Administration & Computer Services	0	0	0	0
022	Public Information	0	0	0	0
023	Research	0	0	0	0
024	Plant Operation & Maintenance	0	0	0	0
025	Food Services	0	0	0	0
026	Pupil Transportation	0	0	0	0
027	Other (all employees not reported above)	0	0	0	0

IT IS HEREBY CERTIFIED THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF ALL INFORMATION SHOWN IN THIS REPORT IS CORRECT

DATE ________ CHIEF EXECUTIVE OFFICER'S SIGNATURE ________

DATE ________ REGIONAL DIRECTOR'S SIGNATURE ________

APPENDIX B

School Board Enrolments, 1969 to 1986

BOARD ______________________

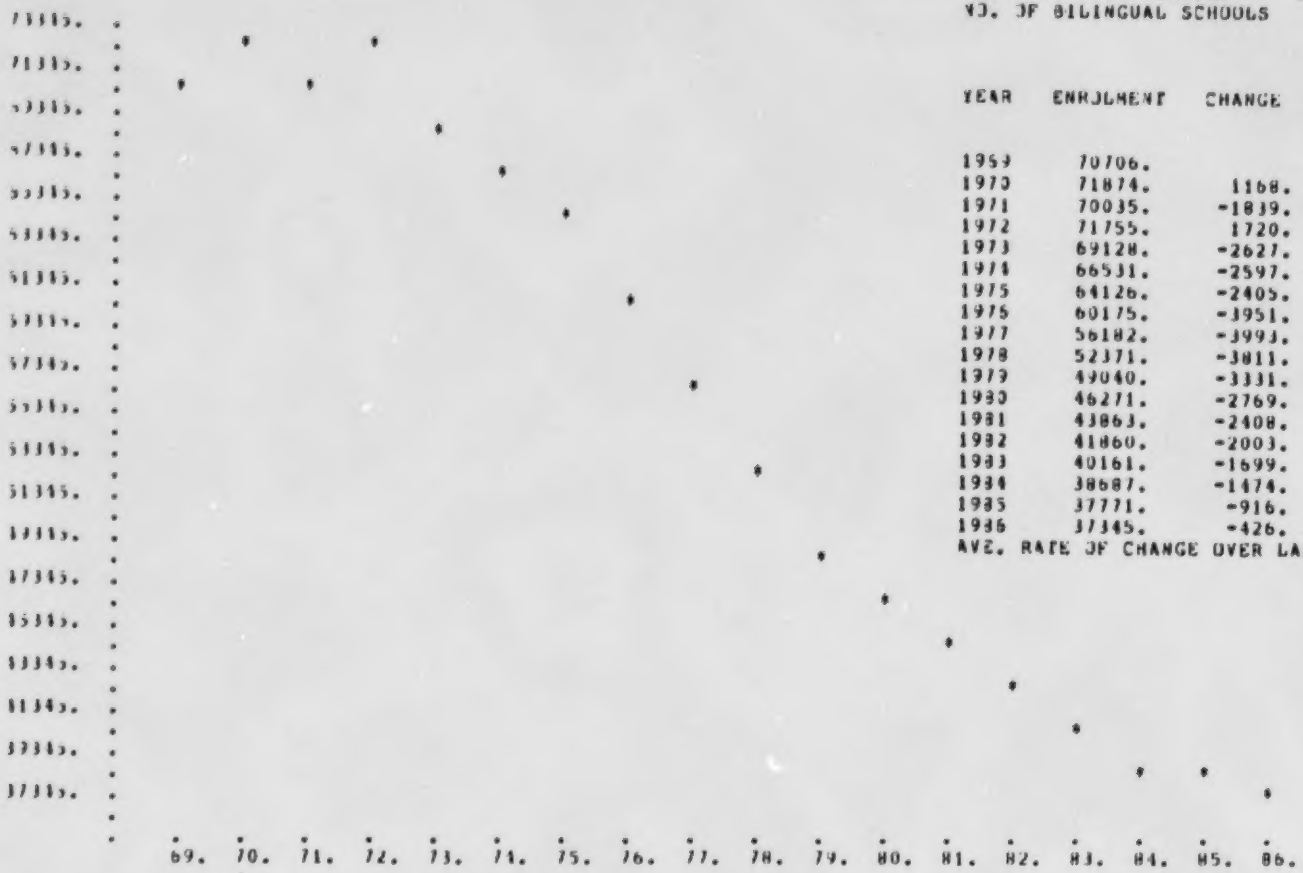
ENROLMENT DATA 1969 TO 1986

Directions: Please record the enrolment data for your board as of September 30 for each of the following years, as well as projections for the next ten years if these have been developed for your board. Enrolment given should be that for all students in board schools.

YEAR	PUBLIC	SECONDARY	TOTAL
1969			
1970			
1971			
1972			
1973			
1974			
1975			
1976			
1977			
1978			
1979			
1980			
1981			
1982			
1983			
1984			
1985			
1986			

```
RANGE  34529.   SIZE OF INTERVALS   2000.   NO. OF INTERVALS    18          BOARD 1-E
```

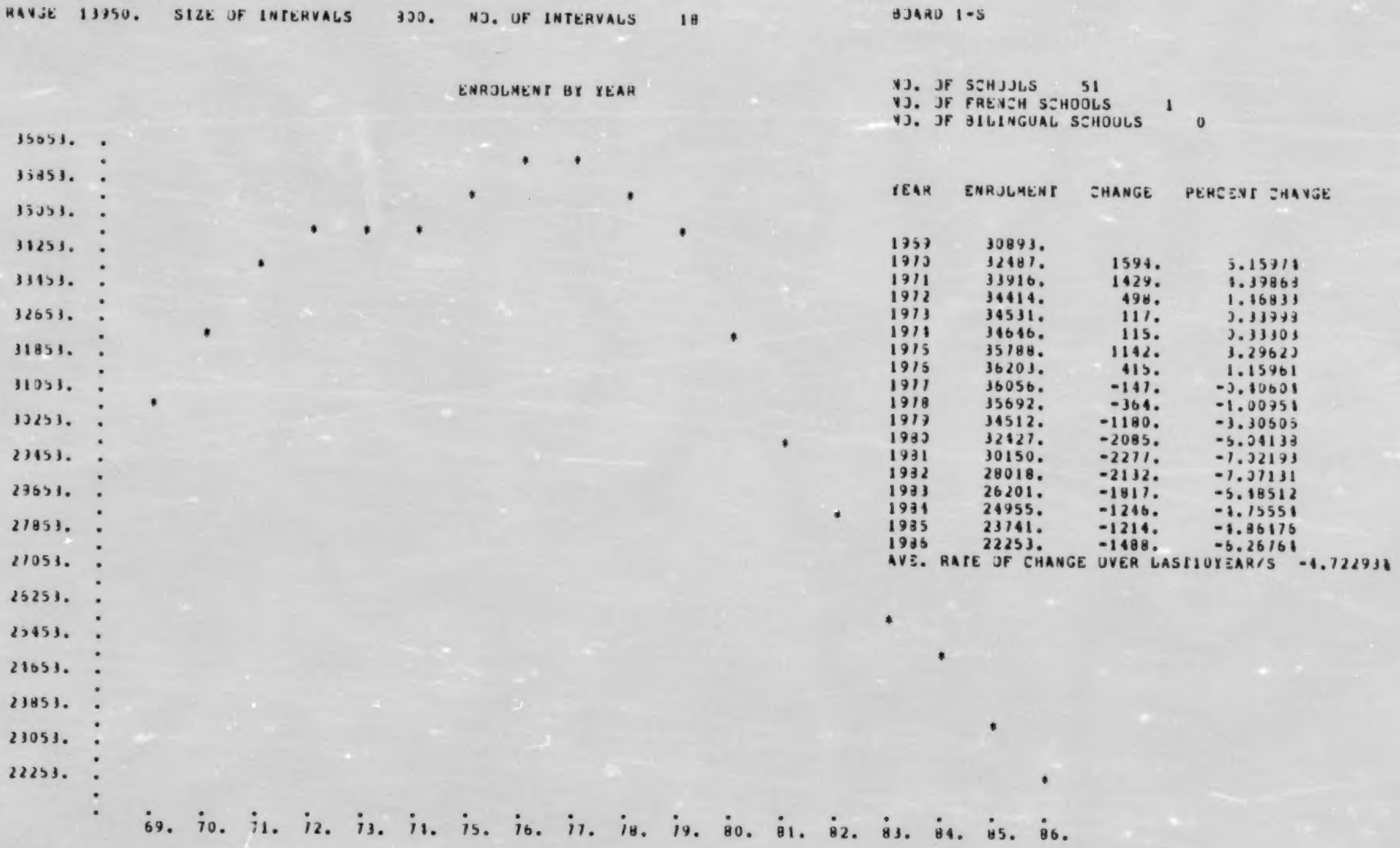
ENROLMENT BY YEAR



```
NO. OF SCHOOLS   147
NO. OF FRENCH SCHOOLS      3
NO. OF BILINGUAL SCHOOLS      0


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969     70706.
1970     71874.      1168.       1.65191
1971     70035.     -1839.      -2.55864
1972     71755.      1720.       2.45591
1973     69128.     -2627.      -3.66107
1974     66531.     -2597.      -3.75680
1975     64126.     -2405.      -3.61485
1976     60175.     -3951.      -6.16131
1977     56182.     -3993.      -6.63565
1978     52371.     -3811.      -6.78331
1979     49040.     -3331.      -6.36039
1980     46271.     -2769.      -5.64641
1981     43863.     -2408.      -5.20412
1982     41860.     -2003.      -4.56649
1983     40161.     -1699.      -4.05877
1984     38687.     -1474.      -3.67023
1985     37771.      -916.      -2.36772
1986     37345.      -426.      -1.12785
AVE. RATE OF CHANGE OVER LAST16YEAR/S  -3.98236%
```



```
RANGE  13950.   SIZE OF INTERVALS    800.   NO. OF INTERVALS    18                  BOARD 1-S

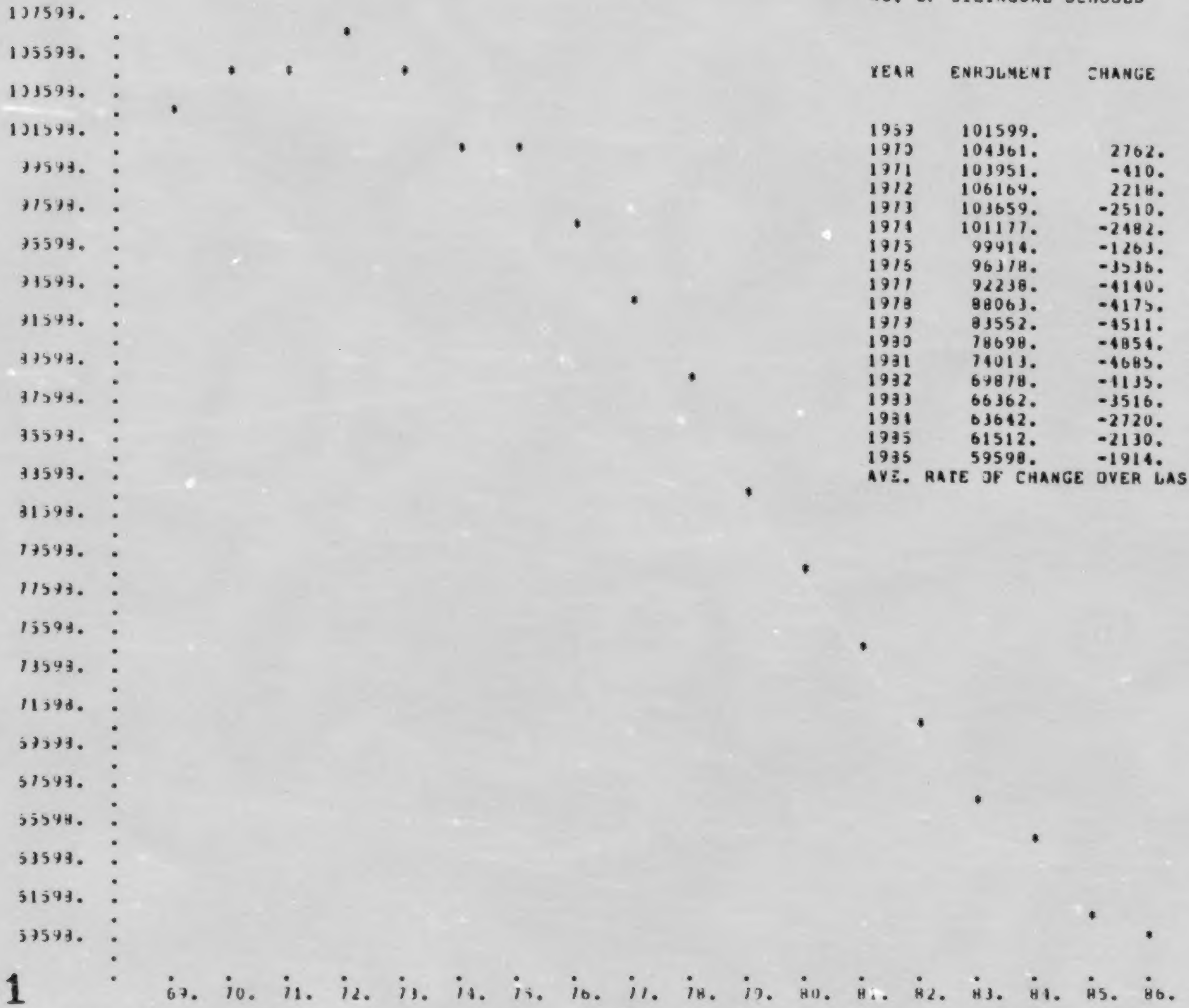
                              ENROLMENT BY YEAR                                     NO. OF SCHOOLS     51
                                                                                    NO. OF FRENCH SCHOOLS      1
                                                                                    NO. OF BILINGUAL SCHOOLS      0

                                                                                    YEAR   ENROLMENT   CHANGE    PERCENT CHANGE

                                                                                    1969     30893.
                                                                                    1970     32487.       1594.       5.15974
                                                                                    1971     33916.       1429.       4.39863
                                                                                    1972     34414.        498.       1.46833
                                                                                    1973     34531.        117.       0.33998
                                                                                    1974     34646.        115.       0.33303
                                                                                    1975     35788.       1142.       3.29620
                                                                                    1976     36203.        415.       1.15961
                                                                                    1977     36056.       -147.      -0.40604
                                                                                    1978     35692.       -364.      -1.00954
                                                                                    1979     34512.      -1180.      -3.30605
                                                                                    1980     32427.      -2085.      -6.04138
                                                                                    1981     30150.      -2277.      -7.02193
                                                                                    1982     28018.      -2132.      -7.07131
                                                                                    1983     26201.      -1817.      -6.48512
                                                                                    1984     24955.      -1246.      -4.75554
                                                                                    1985     23741.      -1214.      -4.86476
                                                                                    1986     22253.      -1488.      -6.26764
                                                                                    AVE. RATE OF CHANGE OVER LAST10YEAR/S  -4.722931
```

```
RANGE  46571.   SIZE OF INTERVALS   2000.   NO. OF INTERVALS    24        BOARD 1-I
```

ENROLMENT BY YEAR



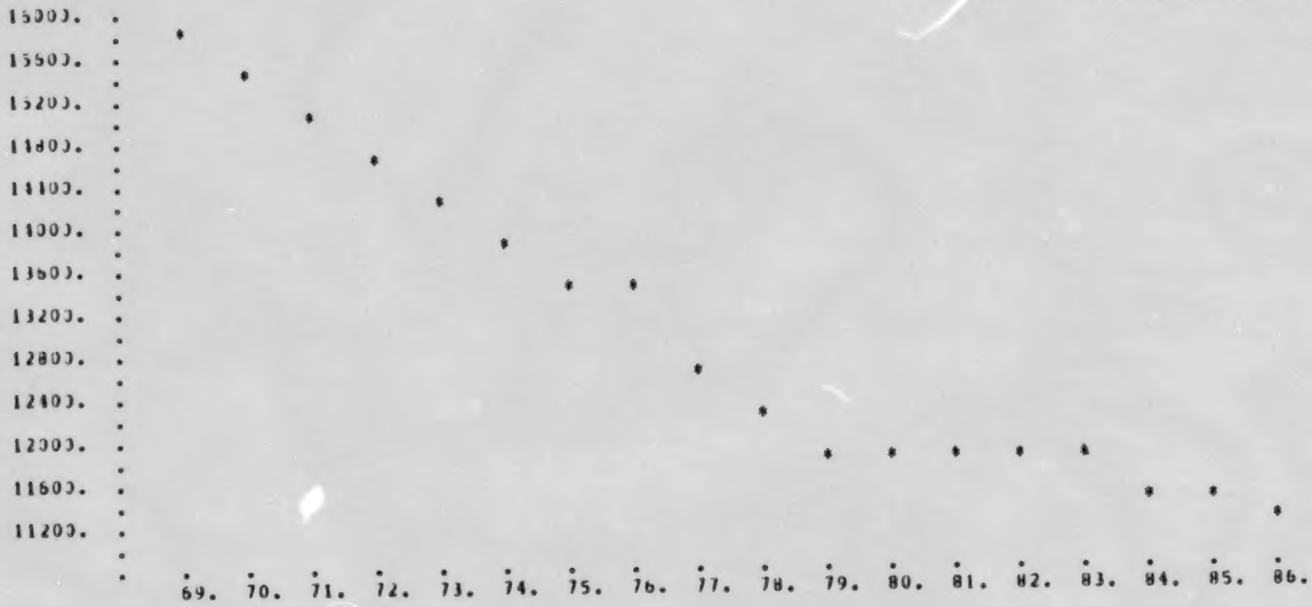
```
NO. OF SCHOOLS   198
NO. OF FRENCH SCHOOLS     4
NO. OF BILINGUAL SCHOOLS     0


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969    101599.
1970    104361.       2762.       2.71853
1971    103951.       -410.      -0.39287
1972    106169.       2218.       2.13370
1973    103659.      -2510.      -2.36115
1974    101177.      -2482.      -2.39439
1975     99914.      -1263.      -1.24831
1976     96378.      -3536.      -3.53904
1977     92238.      -4140.      -4.29559
1978     88063.      -4175.      -4.52633
1979     83552.      -4511.      -5.12247
1980     78698.      -4854.      -5.80955
1981     74013.      -4685.      -5.95314
1982     69878.      -4135.      -5.58685
1983     66362.      -3516.      -5.03163
1984     63642.      -2720.      -4.09873
1985     61512.      -2130.      -3.34685
1986     59598.      -1914.      -3.11159
AVE. RATE OF CHANGE OVER LAST16YEAR/S  -3.41799%
```

```
RANGE   4631.   SIZE OF INTERVALS   400.   NO. OF INTERVALS   12          BOARD 2-E

                         ENROLMENT BY YEAR                    NO. OF SCHOOLS   46
                                                              NO. OF FRENCH SCHOOLS      0
                                                              NO. OF BILINGUAL SCHOOLS      0
```

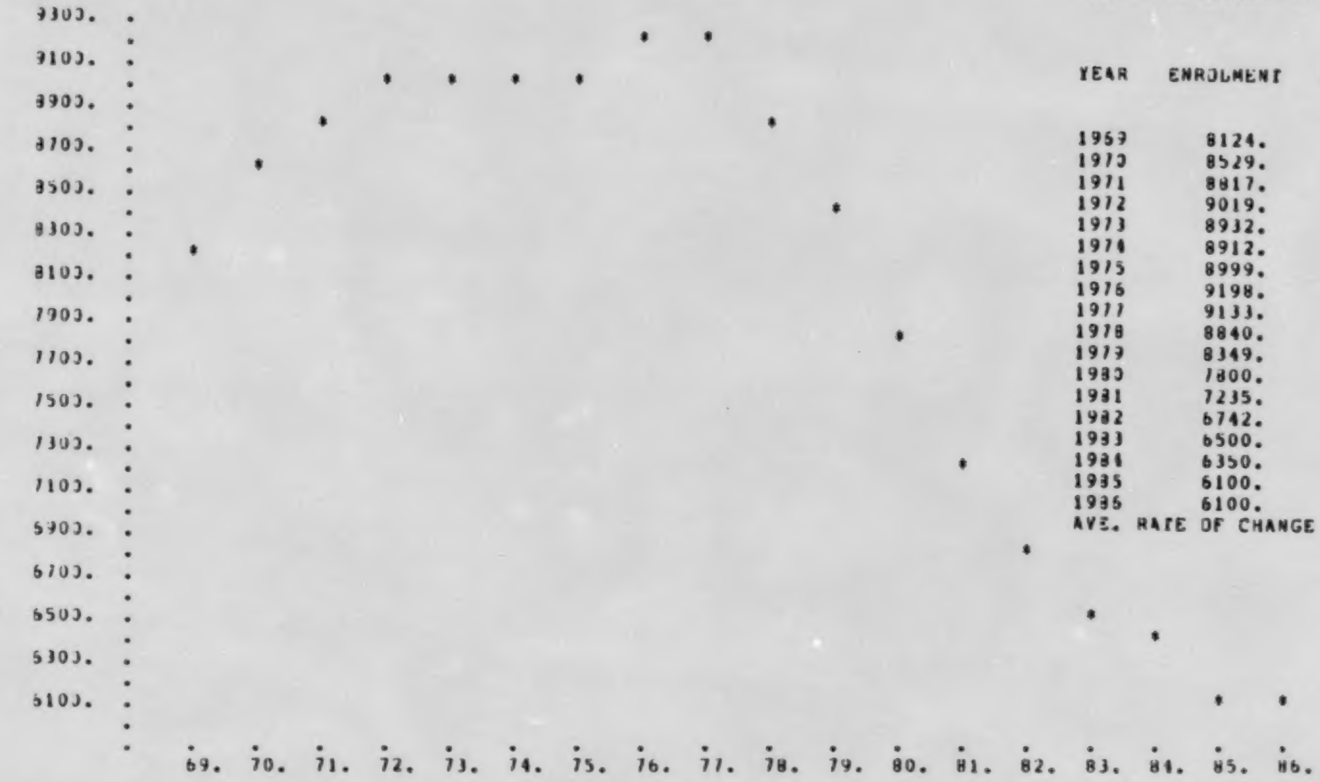


```
YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969     15831.
1970     15442.       -389.      -2.45720
1971     15183.       -259.      -1.67724
1972     14703.       -480.      -3.16143
1973     14065.       -638.      -4.33925
1974     13897.       -168.      -1.19445
1975     13546.       -351.      -2.52572
1976     13292.       -254.      -1.87509
1977     12728.       -564.      -4.24315
1978     12215.       -513.      -4.03048
1979     11930.       -285.      -2.33320
1980     11893.        -37.      -0.31014
1981     11874.        -19.      -0.15975
1982     11760.       -114.      -0.96008
1983     11690.        -70.      -0.59524
1984     11500.       -190.      -1.62532
1985     11250.       -250.      -2.17391
1986     11200.        -50.      -0.44444
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -2.006248
```

```
RANGE   3098.   SIZE OF INTERVALS    200.   NO. OF INTERVALS    16          .   BOARD 2-S
```

ENROLMENT BY YEAR



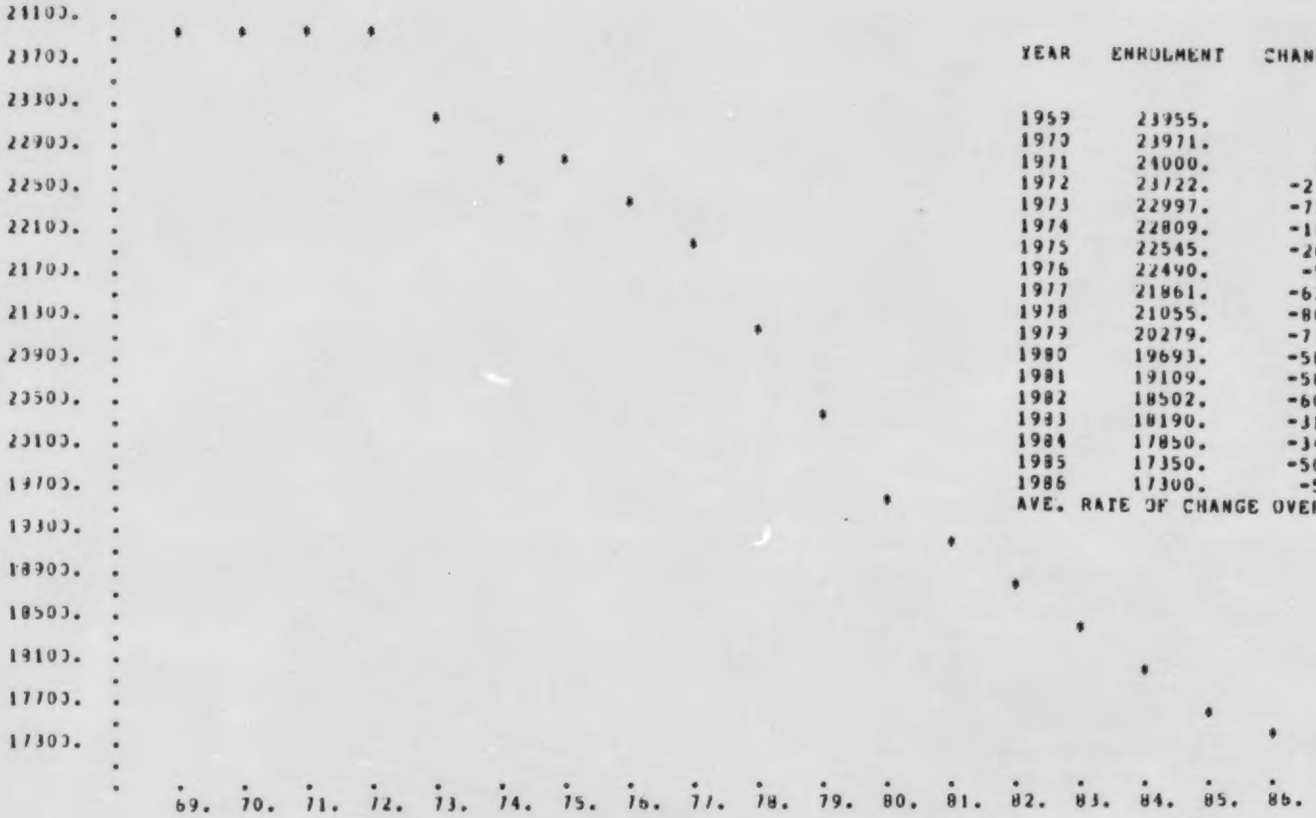
```
NO. OF SCHOOLS      8
NO. OF FRENCH SCHOOLS      0
NO. OF BILINGUAL SCHOOLS      0


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969      8124.
1970      8529.      405.       4.98523
1971      8817.      288.       3.37671
1972      9019.      202.       2.29103
1973      8932.      -87.      -0.96463
1974      8912.      -20.      -0.22391
1975      8999.       87.       0.97621
1976      9198.      199.       2.21136
1977      9133.      -65.      -0.70668
1978      8840.     -293.      -3.20815
1979      8349.     -491.      -5.55430
1980      7800.     -549.      -6.57561
1981      7235.     -565.      -7.24359
1982      6742.     -493.      -6.81410
1983      6500.     -242.      -3.58944
1984      6350.     -150.      -2.30769
1985      6100.     -250.      -3.93701
1986      6100.        0.       0.00000
AVE. RATE OF CHANGE OVER LAST14YEAR/S  -2.70983%
```

```
                                                                    BOARD 2-T
RANGE   6700.   SIZE OF INTERVALS    400.   NO. OF INTERVALS    17

                                                                    NO. OF SCHOOLS     54
                                  ENROLMENT BY YEAR                 NO. OF FRENCH SCHOOLS      0
                                                                    NO. OF BILINGUAL SCHOOLS      0
```

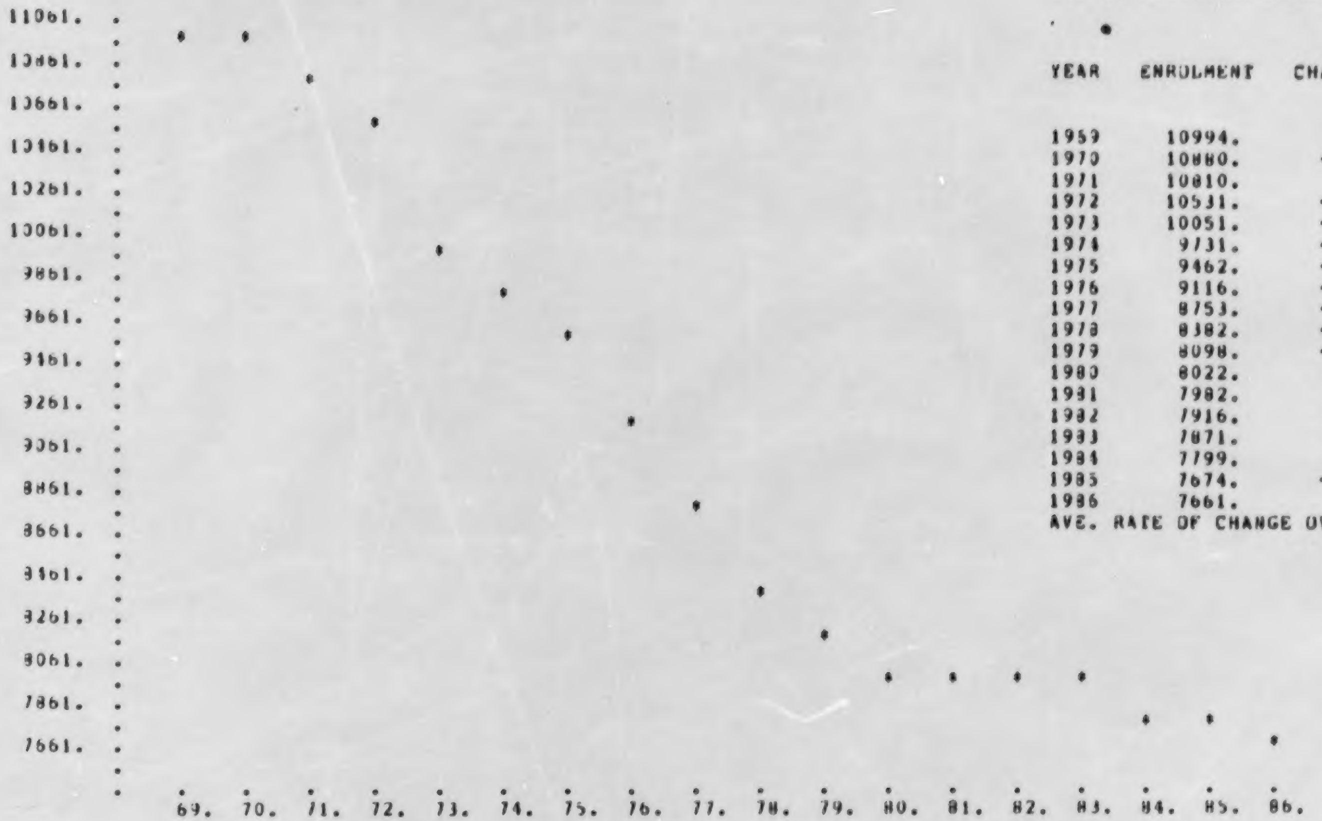


```
YEAR    ENROLMENT    CHANGE    PERCENT CHANGE


1969     23955.
1970     23971.          16.       0.06679
1971     24000.          29.       0.12098
1972     23722.        -278.      -1.15833
1973     22997.        -725.      -3.05623
1974     22809.        -188.      -0.81750
1975     22545.        -264.      -1.15744
1976     22490.         -55.      -0.24395
1977     21861.        -629.      -2.79680
1978     21055.        -806.      -3.68693
1979     20279.        -776.      -3.68559
1980     19693.        -586.      -2.88969
1981     19109.        -584.      -2.96552
1982     18502.        -607.      -3.17651
1983     18190.        -312.      -1.68630
1984     17850.        -340.      -1.86915
1985     17350.        -500.      -2.80112
1986     17300.         -50.      -0.28818
AVE. RATE OF CHANGE OVER LAST15YEAR/S  -2.15195%
```

```
RANGE   3333.   SIZE OF INTERVALS    200.   NO. OF INTERVALS    17               BOARD 3-E
```

ENROLMENT BY YEAR



```
NO. OF SCHOOLS     18
NO. OF FRENCH SCHOOLS      0
NO. OF BILINGUAL SCHOOLS      0

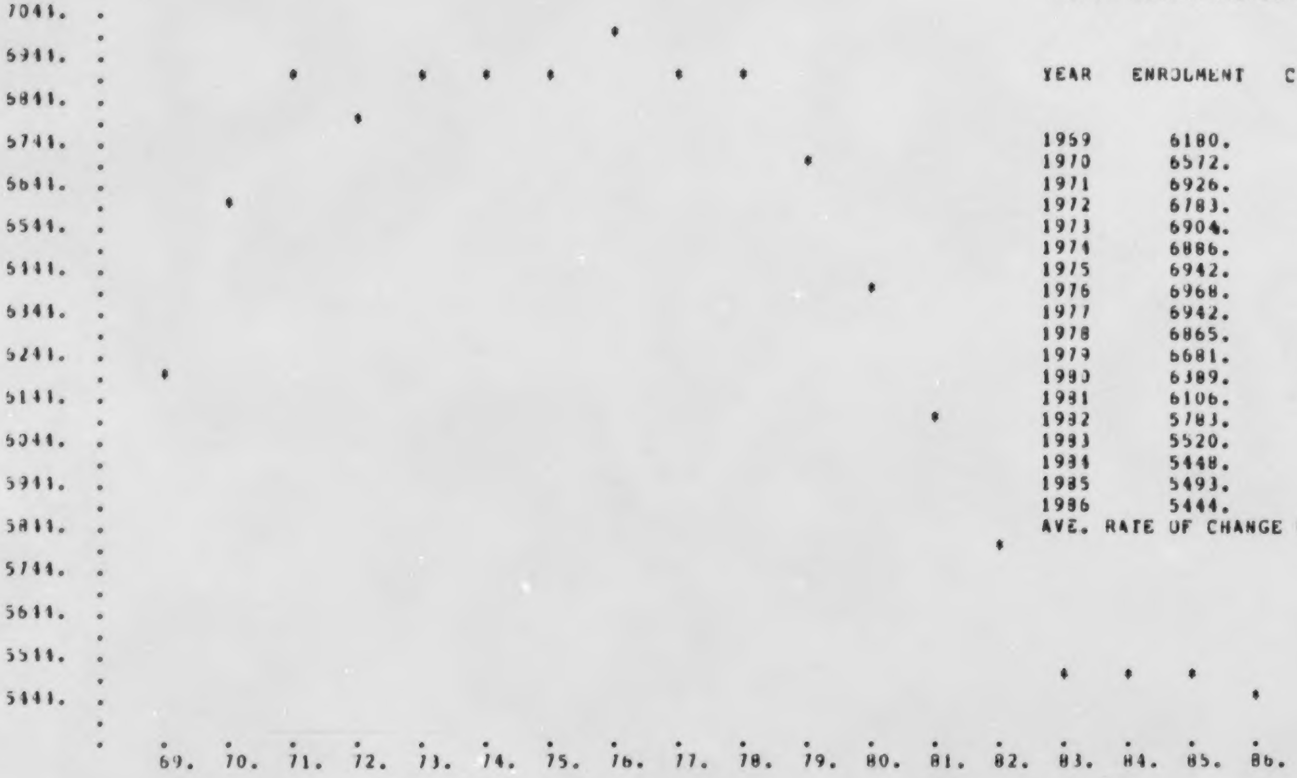
YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969     10994.
1970     10880.      -114.     -1.03693
1971     10810.       -70.     -0.64338
1972     10531.      -279.     -2.58094
1973     10051.      -480.     -4.55797
1974      9731.      -320.     -3.18375
1975      9462.      -269.     -2.76436
1976      9116.      -346.     -3.65673
1977      8753.      -363.     -3.98201
1978      8382.      -371.     -4.23855
1979      8098.      -284.     -3.38821
1980      8022.       -76.     -0.93850
1981      7982.       -40.     -0.49863
1982      7916.       -66.     -0.82685
1983      7871.       -45.     -0.56847
1984      7799.       -72.     -0.91475
1985      7674.      -125.     -1.60277
1986      7661.       -13.     -0.16940
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -2.09131%
```

```
RANGE   1524.   SIZE OF INTERVALS    100.   NO. OF INTERVALS    16                  BOARD 3-S

                                                                                    NO. OF SCHOOLS      7
                                                                                    NO. OF FRENCH SCHOOLS      0
                                                                                    NO. OF BILINGUAL SCHOOLS      0
```

ENROLMENT BY YEAR



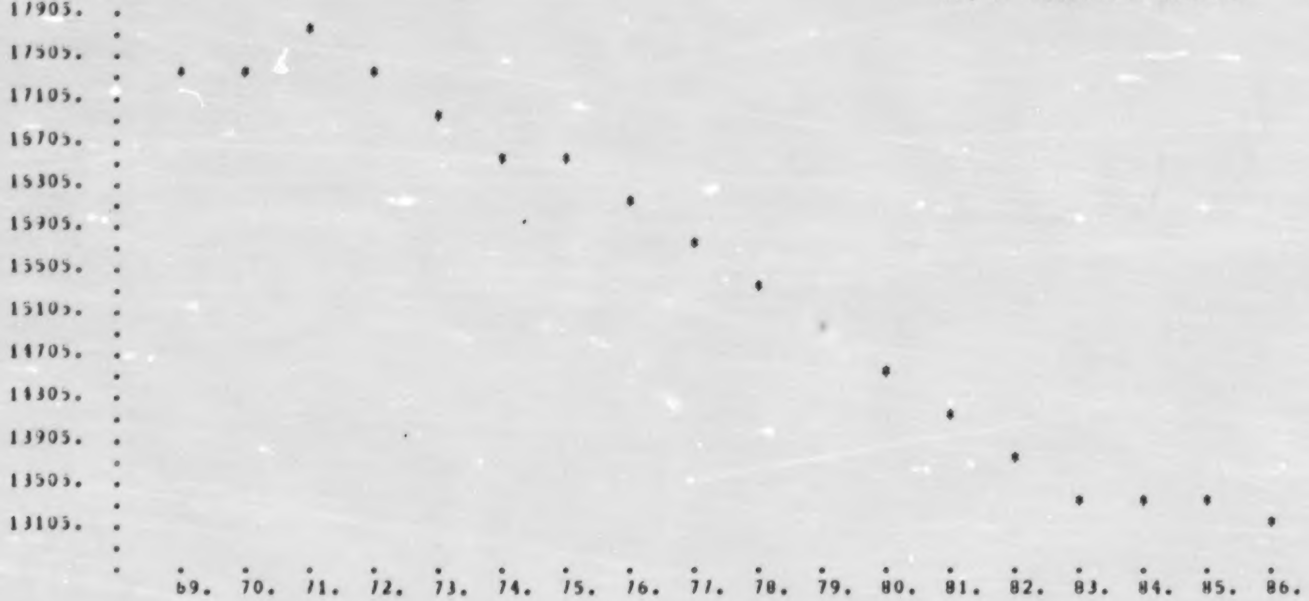
```
YEAR   ENROLMENT   CHANGE   PERCENT CHANGE

1969      6180.
1970      6572.       392.       6.34304
1971      6926.       354.       5.38649
1972      6783.      -143.      -2.06468
1973      6904.       121.       1.78387
1974      6886.       -18.      -0.26072
1975      6942.        56.       0.81324
1976      6968.        26.       0.37453
1977      6942.       -26.      -0.37313
1978      6865.       -77.      -1.10919
1979      6681.      -184.      -2.68026
1980      6389.      -292.      -4.37060
1981      6106.      -283.      -4.42949
1982      5783.      -323.      -5.28983
1983      5520.      -263.      -4.54781
1984      5448.       -72.      -1.30435
1985      5493.        45.       0.82599
1986      5444.       -49.      -0.89204
AVE. RATE OF CHANGE OVER LAST15YEAR/S  -1.568304
```

```
RANGE   4631.   SIZE OF INTERVALS    400.   NO. OF INTERVALS    12        BOARD 3-T
```

ENROLMENT BY YEAR

```
NO. OF SCHOOLS    45
NO. OF FRENCH SCHOOLS      0
NO. OF BILINGUAL SCHOOLS      0
```

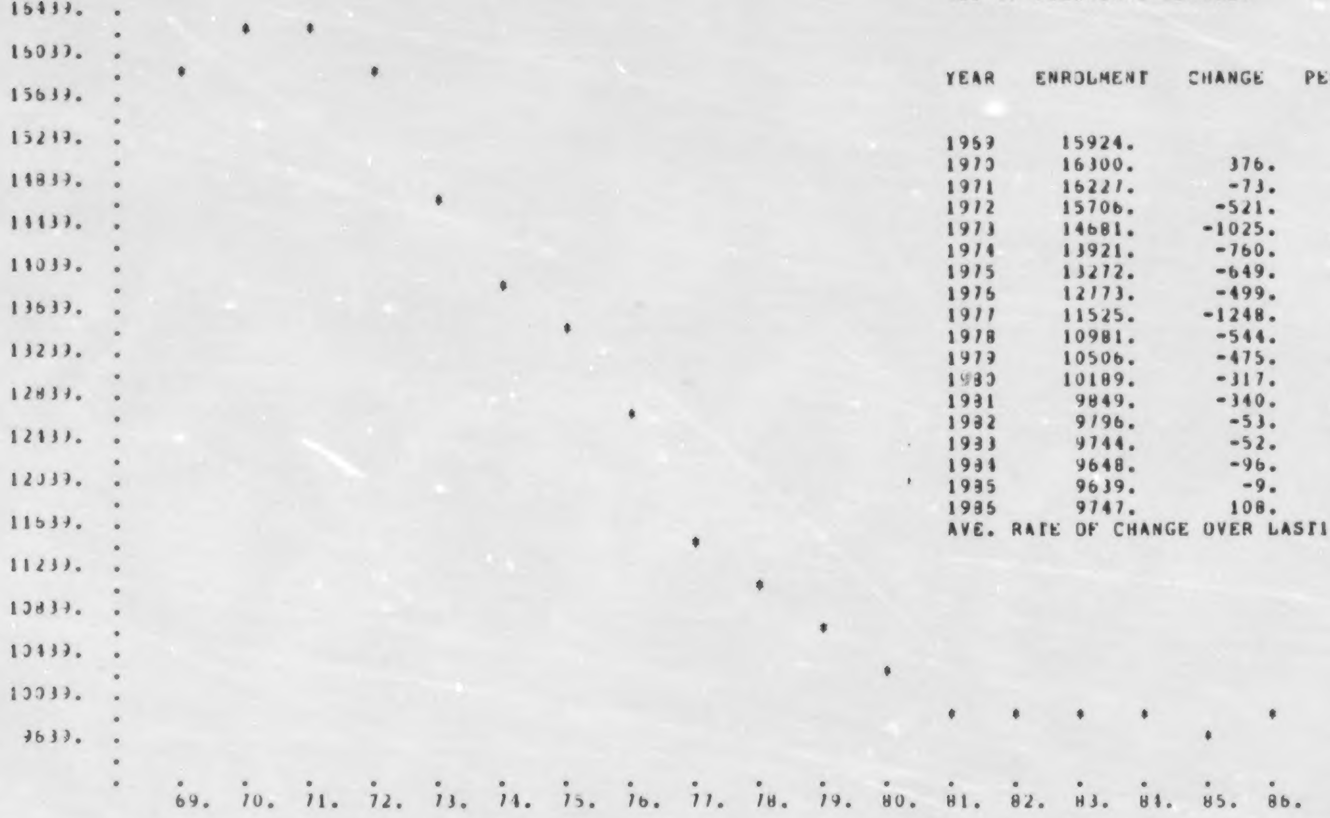


```
YEAR   ENROLMENT   CHANGE   PERCENT CHANGE

1969     17174.
1970     17452.      278.       1.61873
1971     17736.      284.       1.62732
1972     17314.     -422.      -2.37934
1973     16955.     -359.      -2.07347
1974     16617.     -338.      -1.99351
1975     16404.     -213.      -1.28182
1976     16084.     -320.      -1.95074
1977     15695.     -389.      -2.41855
1978     15247.     -448.      -2.85441
1979     14779.     -468.      -3.06945
1980     14411.     -368.      -2.49002
1981     14088.     -323.      -2.24134
1982     13699.     -389.      -2.76122
1983     13391.     -308.      -2.24834
1984     13247.     -144.      -1.07535
1985     13167.      -80.      -0.60391
1986     13105.      -62.      -0.47087
AVE. RATE OF CHANGE OVER LAST15YEAR/S  -1.994168
```

```
RANGE   6661.   SIZE OF INTERVALS    400.   NO. OF INTERVALS    17        BOARD 4-E
```

```
                         ENROLMENT BY YEAR
```



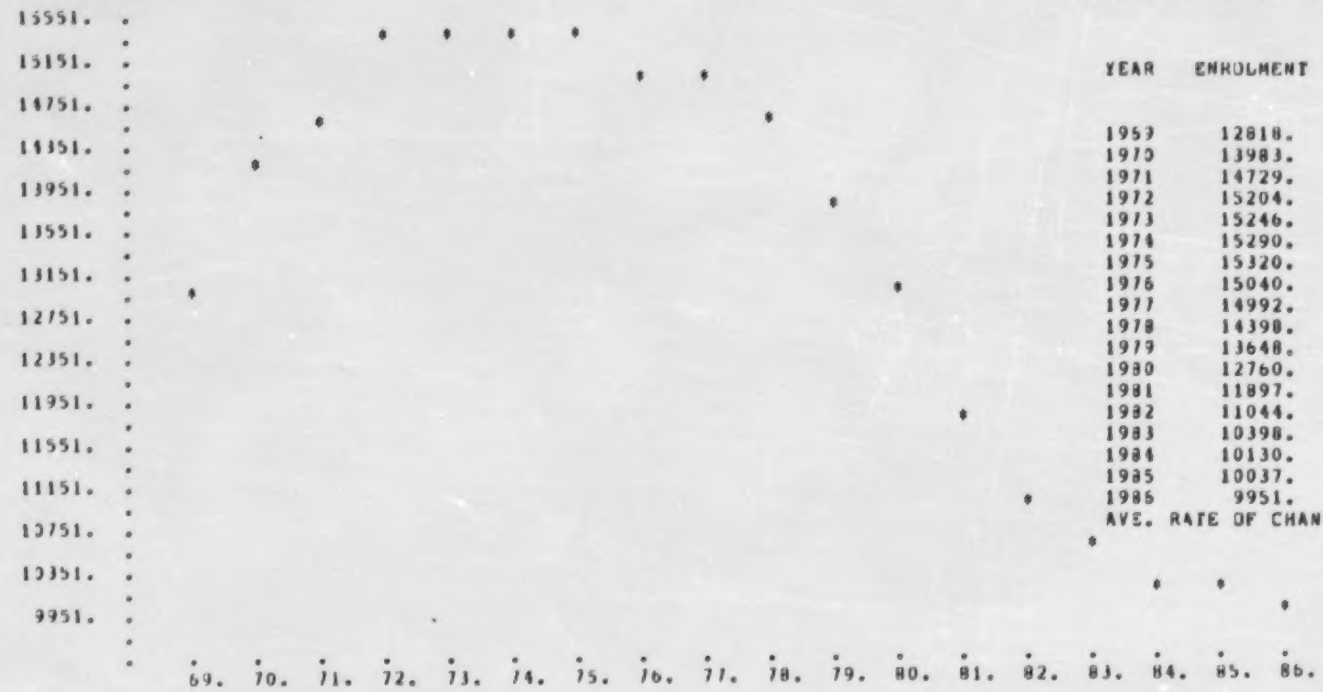
```
NO. OF SCHOOLS    44
NO. OF FRENCH SCHOOLS     0
NO. OF BILINGUAL SCHOOLS     0


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969     15924.
1970     16300.        376.       2.36122
1971     16227.        -73.      -0.44785
1972     15706.       -521.      -3.21070
1973     14681.      -1025.      -6.52517
1974     13921.       -760.      -5.17675
1975     13272.       -649.      -4.66202
1976     12773.       -499.      -3.75980
1977     11525.      -1248.      -9.77061
1978     10981.       -544.      -4.72017
1979     10506.       -475.      -4.32565
1980     10189.       -317.      -3.01732
1981      9849.       -340.      -3.33693
1982      9796.        -53.      -0.53813
1983      9744.        -52.      -0.53083
1984      9648.        -96.      -0.98522
1985      9639.         -9.      -0.09328
1986      9747.        108.       1.12045
AVE. RATE OF CHANGE OVER LAST16YEAR/S  -3.12381%
```

```
RANGE   5369.   SIZE OF INTERVALS    400.   NO. OF INTERVALS    14                    BOARD 4-S
```

ENROLMENT BY YEAR



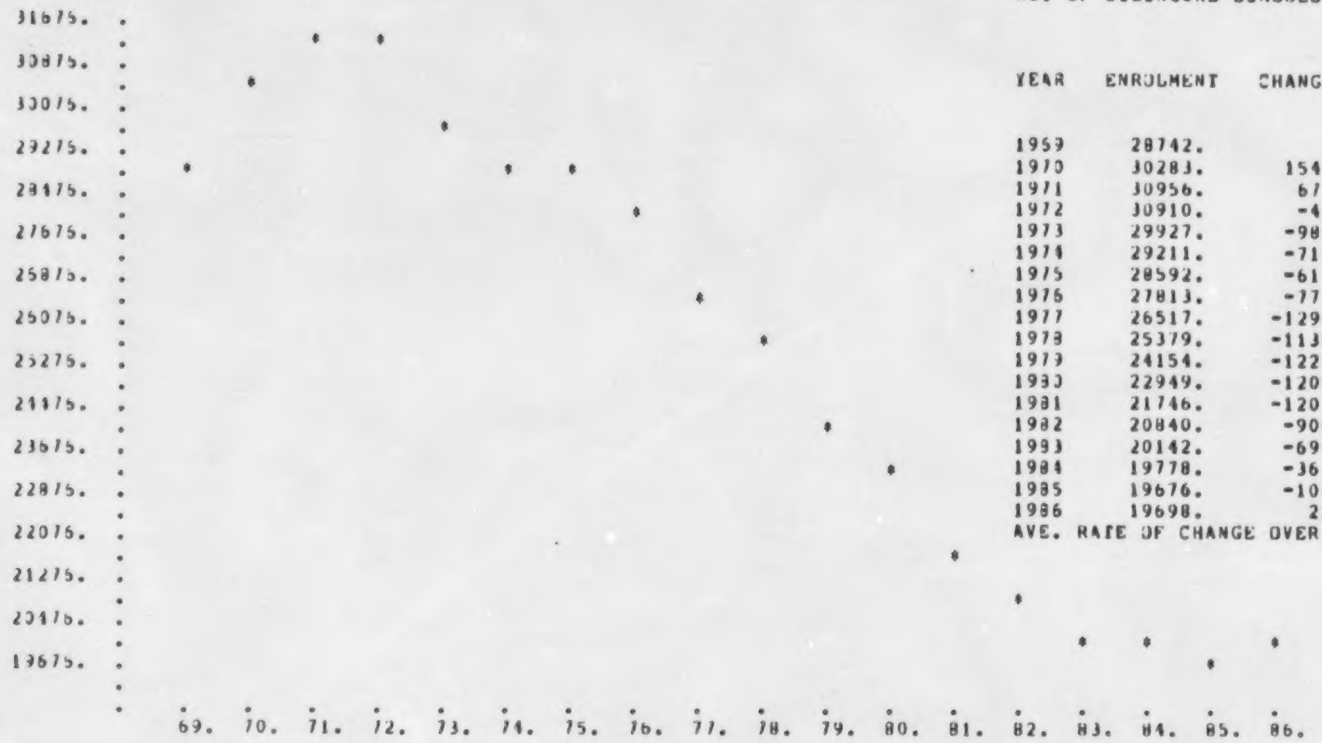
```
NO. OF SCHOOLS    17
NO. OF FRENCH SCHOOLS      4
NO. OF BILINGUAL SCHOOLS      1


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969     12818.
1970     13983.     1165.      9.08878
1971     14729.      746.      5.33505
1972     15204.      475.      3.22493
1973     15246.       42.      0.27624
1974     15290.       44.      0.28860
1975     15320.       30.      0.19621
1976     15040.     -280.     -1.82768
1977     14992.      -48.     -0.31915
1978     14398.     -594.     -3.96211
1979     13648.     -750.     -5.20905
1980     12760.     -888.     -6.50645
1981     11897.     -863.     -5.76332
1982     11044.     -853.     -7.16987
1983     10398.     -646.     -5.84933
1984     10130.     -268.     -2.57742
1985     10037.      -93.     -0.91807
1986      9951.      -86.     -0.85683
AVE. RATE OF CHANGE OVER LAST11YEAR/S  -3.81440%
```

```
RANGE  11280.   SIZE OF INTERVALS    800.   NO. OF INTERVALS    15            BOARD 4-I
```

ENROLMENT BY YEAR



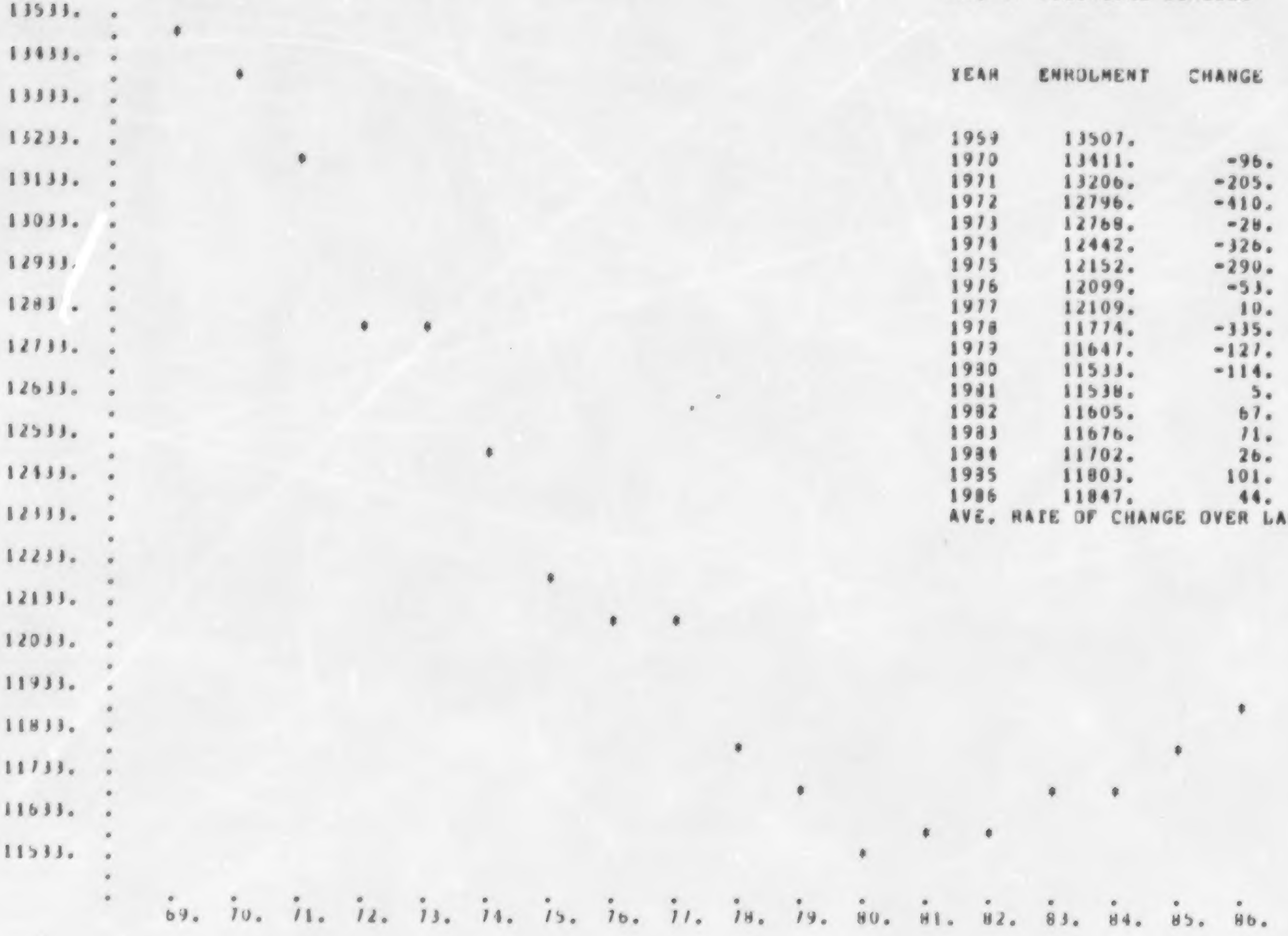
```
NO. OF SCHOOLS    61
NO. OF FRENCH SCHOOLS      4
NO. OF BILINGUAL SCHOOLS      1


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969     28742.
1970     30283.       1541.       5.36149
1971     30956.        673.       2.22237
1972     30910.        -46.      -0.14860
1973     29927.       -983.      -3.18020
1974     29211.       -716.      -2.39249
1975     28592.       -619.      -2.11905
1976     27813.       -779.      -2.72454
1977     26517.      -1296.      -4.65969
1978     25379.      -1138.      -4.29159
1979     24154.      -1225.      -4.82680
1980     22949.      -1205.      -4.98882
1981     21746.      -1203.      -5.24206
1982     20840.       -906.      -4.16623
1983     20142.       -698.      -3.34933
1984     19778.       -364.      -1.80717
1985     19676.       -102.      -0.51572
1986     19698.         22.       0.11181
AVE. RATE OF CHANGE OVER LAST15YEAR/S  -2.953378
```

```
RANGE   1974.   SIZE OF INTERVALS    100.   NO. OF INTERVALS    20          BOARD 5-E
```

ENROLMENT BY YEAR



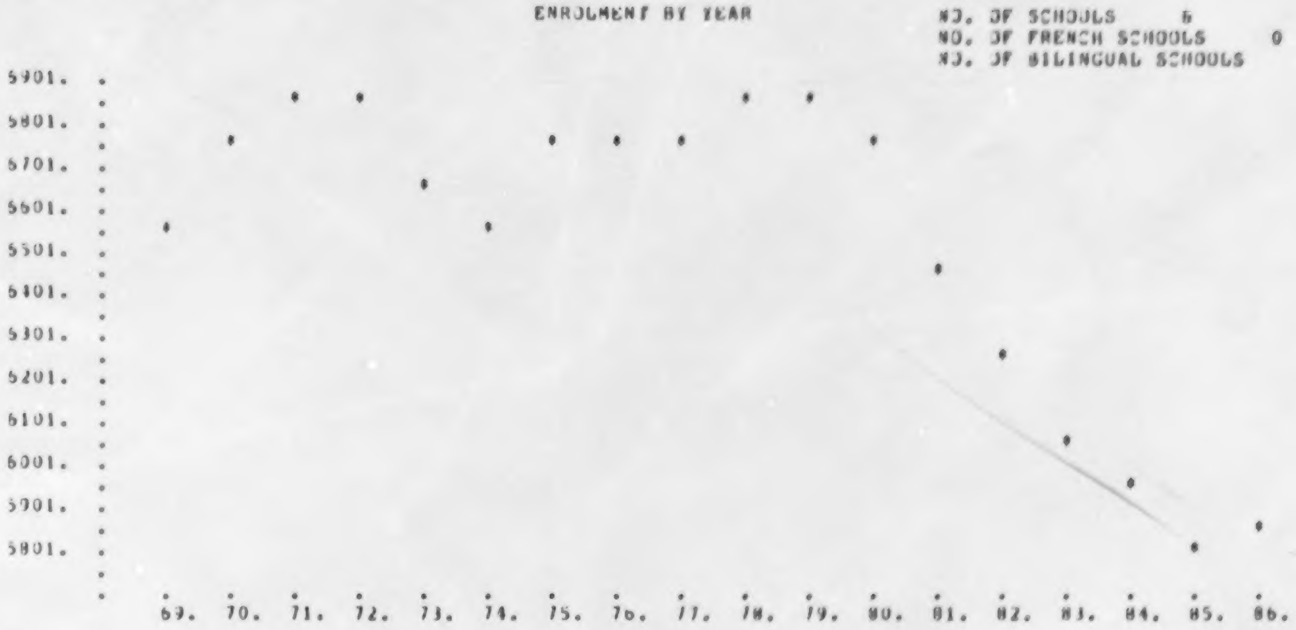
```
NO. OF SCHOOLS    40
NO. OF FRENCH SCHOOLS     0
NO. OF BILINGUAL SCHOOLS     0


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE

1969     13507.
1970     13411.       -96.      -0.71074
1971     13206.      -205.      -1.52860
1972     12796.      -410.      -3.10465
1973     12768.       -28.      -0.21882
1974     12442.      -326.      -2.55325
1975     12152.      -290.      -2.33081
1976     12099.       -53.      -0.43614
1977     12109.        10.       0.08265
1978     11774.      -335.      -2.76654
1979     11647.      -127.      -1.07865
1980     11533.      -114.      -0.97879
1981     11538.         5.       0.04335
1982     11605.        67.       0.58069
1983     11676.        71.       0.61181
1984     11702.        26.       0.22268
1985     11803.       101.       0.86310
1986     11847.        44.       0.37279
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -0.76058%
```

```
RANGE   1090.   SIZE OF INTERVALS    100.   NO. OF INTERVALS    11        BOARD 5-5
```

```
                                        NO. OF SCHOOLS     6
                                        NO. OF FRENCH SCHOOLS      0
                                        NO. OF BILINGUAL SCHOOLS     0
```

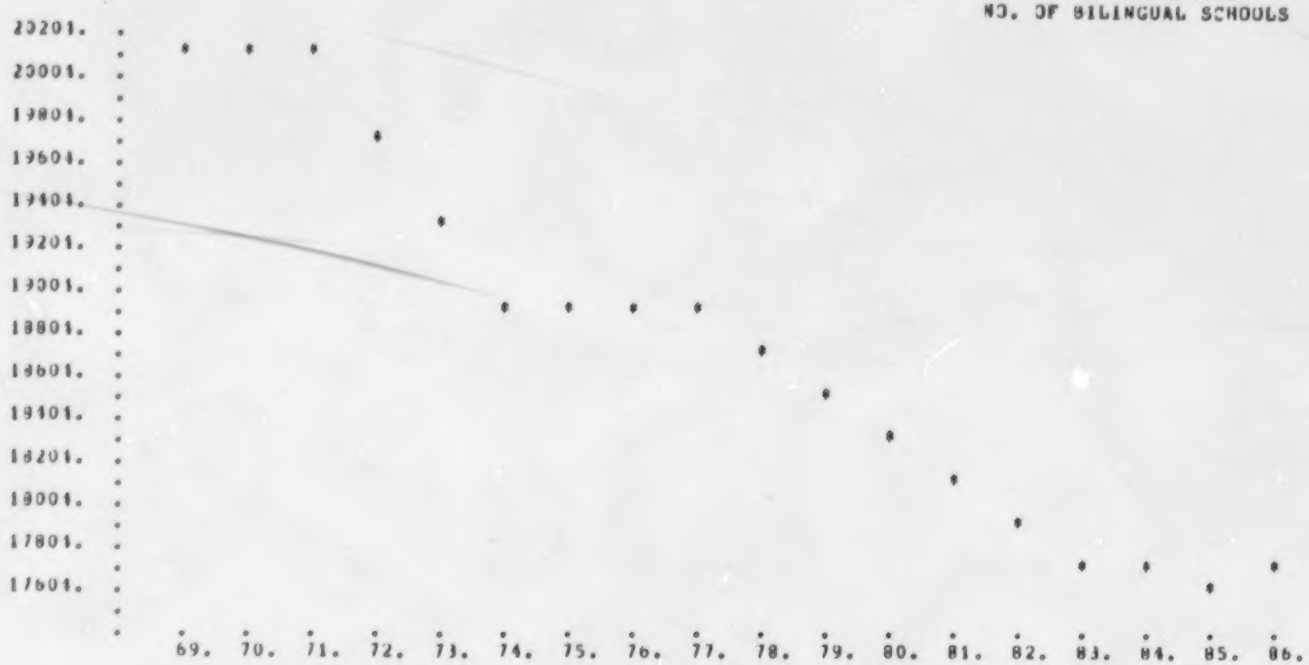


```
YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969      6544.
1970      6724.       180.       2.75061
1971      6891.       167.       2.48364
1972      6828.       -63.      -0.91424
1973      6623.      -205.      -3.00234
1974      6549.       -74.      -1.11732
1975      6758.       209.       3.19133
1976      6744.       -14.      -0.20715
1977      6757.        13.       0.19275
1978      6875.       118.       1.74634
1979      6849.       -26.      -0.37818
1980      6705.      -144.      -2.10250
1981      6481.      -224.      -3.34079
1982      6260.      -221.      -3.40997
1983      6006.      -254.      -4.05751
1984      5939.       -67.      -1.11555
1985      5801.      -138.      -2.32362
1986      5808.         7.       0.12067
AVG. RATE OF CHANGE OVER LAST15YEAR/S  -1.11451%
```

```
RANGE   2531.   SIZE OF INTERVALS    200.   NO. OF INTERVALS    13          BOARD 5-T

                                 ENROLMENT BY YEAR                 NO. OF SCHOOLS    46
                                                                   NO. OF FRENCH SCHOOLS      0
                                                                   NO. OF BILINGUAL SCHOOLS      0
```

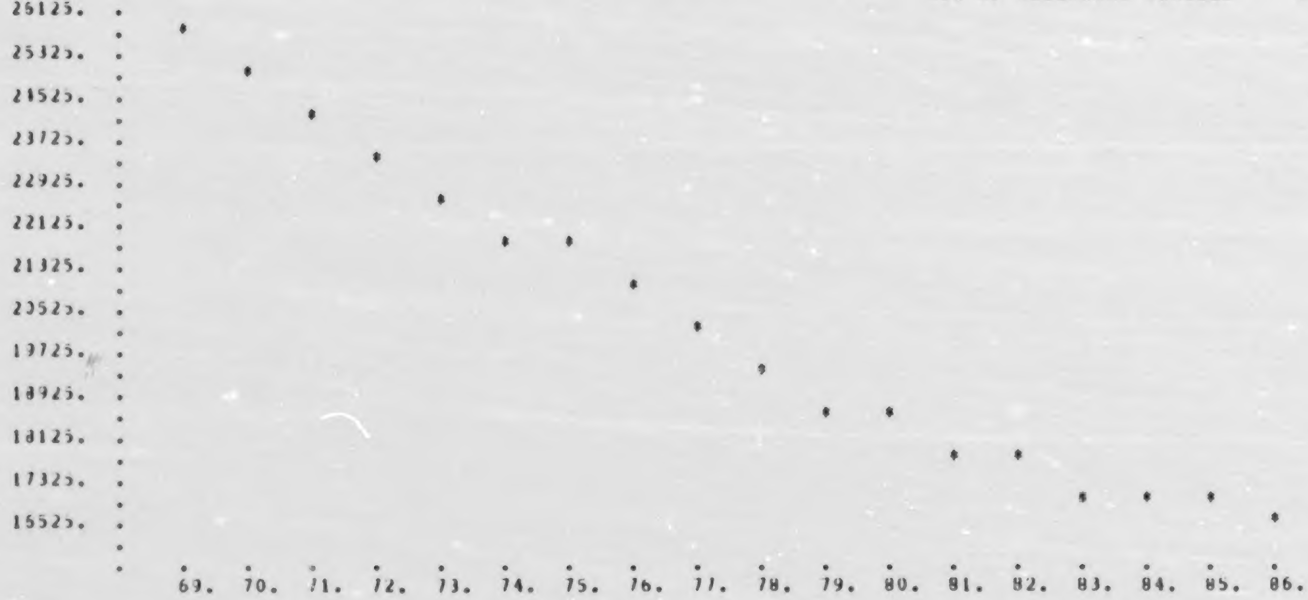


```
YEAR    ENROLMENT   CHANGE   PERCENT CHANGE

1969     20051.
1970     20135.        84.       0.41893
1971     20097.       -38.      -0.18873
1972     19624.      -473.      -2.35359
1973     19391.      -233.      -1.18732
1974     18991.      -400.      -2.06281
1975     18910.       -81.      -0.42652
1976     18843.       -67.      -0.35431
1977     18866.        23.       0.12205
1978     18649.      -217.      -1.15022
1979     18496.      -153.      -0.82042
1980     18238.      -258.      -1.39490
1981     18019.      -219.      -1.20079
1982     17865.      -154.      -0.85465
1983     17682.      -183.      -1.02435
1984     17641.       -41.      -0.23187
1985     17604.       -37.      -0.20974
1986     17655.        51.       0.28971
AVE. RATE OF CHANGE OVER LAST16YEAR/S  -0.815538
```

```
RANGE   8934.   SIZE OF INTERVALS    800.   NO. OF INTERVALS    12        BOARD 6-E

                        ENROLMENT BY YEAR              NO. OF SCHOOLS    83
                                                       NO. OF FRENCH SCHOOLS      4
                                                       NO. OF BILINGUAL SCHOOLS      0
```



```
YEAR    ENROLMENT    CHANGE    PERCENT CHANGE

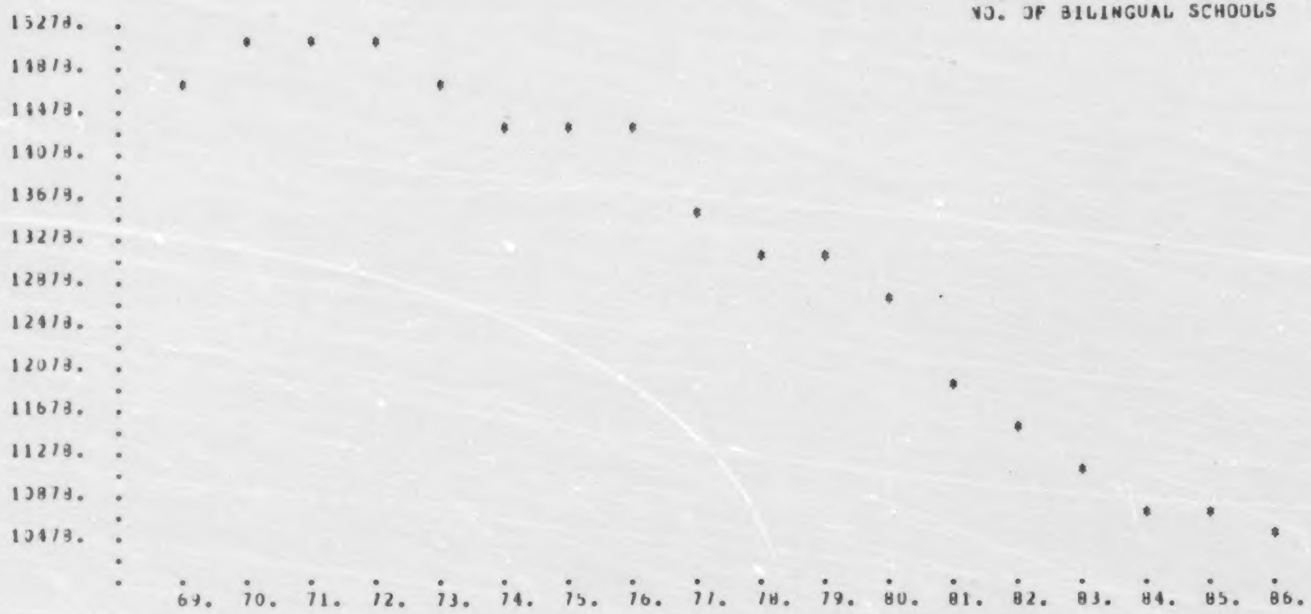

1969      25459.
1970      25007.       -452.      -1.77540
1971      24340.       -667.      -2.66725
1972      23435.       -905.      -3.71815
1973      22401.      -1034.      -4.41220
1974      21960.       -441.      -1.96865
1975      21465.       -495.      -2.25410
1976      20599.       -866.      -4.03447
1977      20160.       -439.      -2.13117
1978      19273.       -887.      -4.39980
1979      18566.       -707.      -3.66831
1980      18151.       -415.      -2.23527
1981      18021.       -130.      -0.71621
1982      17586.       -435.      -2.41385
1983      17231.       -355.      -2.01865
1984      16849.       -382.      -2.21693
1985      16590.       -259.      -1.53718
1986      16525.        -65.      -0.39180
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -2.50350%
```

RANGE 4475. SIZE OF INTERVALS 400. NO. OF INTERVALS 12

BOARD 6-S

NO. OF SCHOOLS 16
NO. OF FRENCH SCHOOLS 1
NO. OF BILINGUAL SCHOOLS 1

ENROLMENT BY YEAR

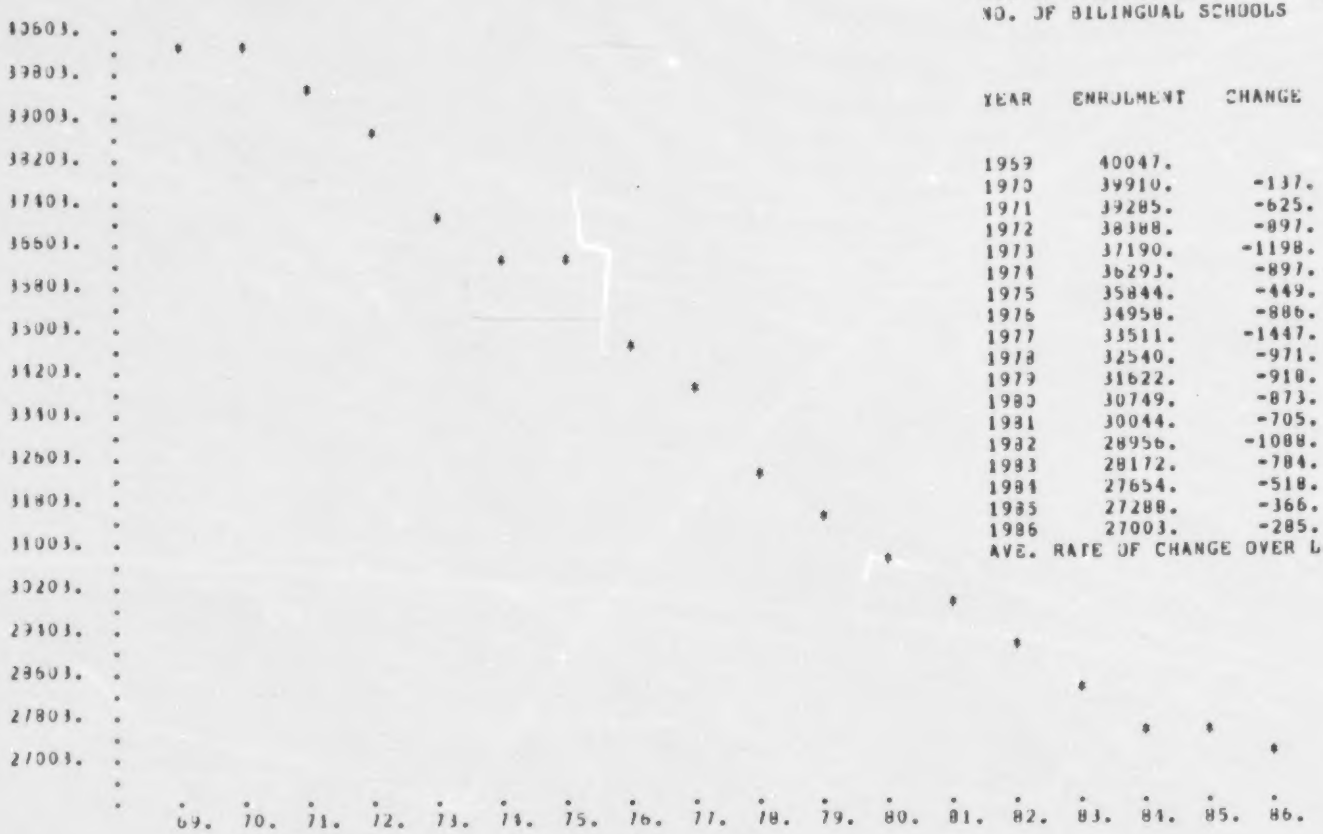


YEAR	ENROLMENT	CHANGE	PERCENT CHANGE
1969	14588.		
1970	14903.	315.	2.15931
1971	14945.	42.	0.28182
1972	14953.	8.	0.05353
1973	14789.	-164.	-1.09677
1974	14333.	-456.	-3.08337
1975	14379.	46.	0.32094
1976	14359.	-20.	-0.13909
1977	13351.	-1008.	-7.01999
1978	13267.	-84.	-0.62917
1979	13056.	-211.	-1.59041
1980	12598.	-458.	-3.50797
1981	12023.	-575.	-4.56422
1982	11370.	-653.	-5.43125
1983	10941.	-429.	-3.77309
1984	10805.	-136.	-1.24303
1985	10698.	-107.	-0.99023
1986	10478.	-220.	-2.05645

AVE. RATE OF CHANGE OVER LAST14YEAR/S -2.486011

```
RANGE  13044.   SIZE OF INTERVALS    800.   NO. OF INTERVALS    17                BOARD 5-T
```

ENROLMENT BY YEAR



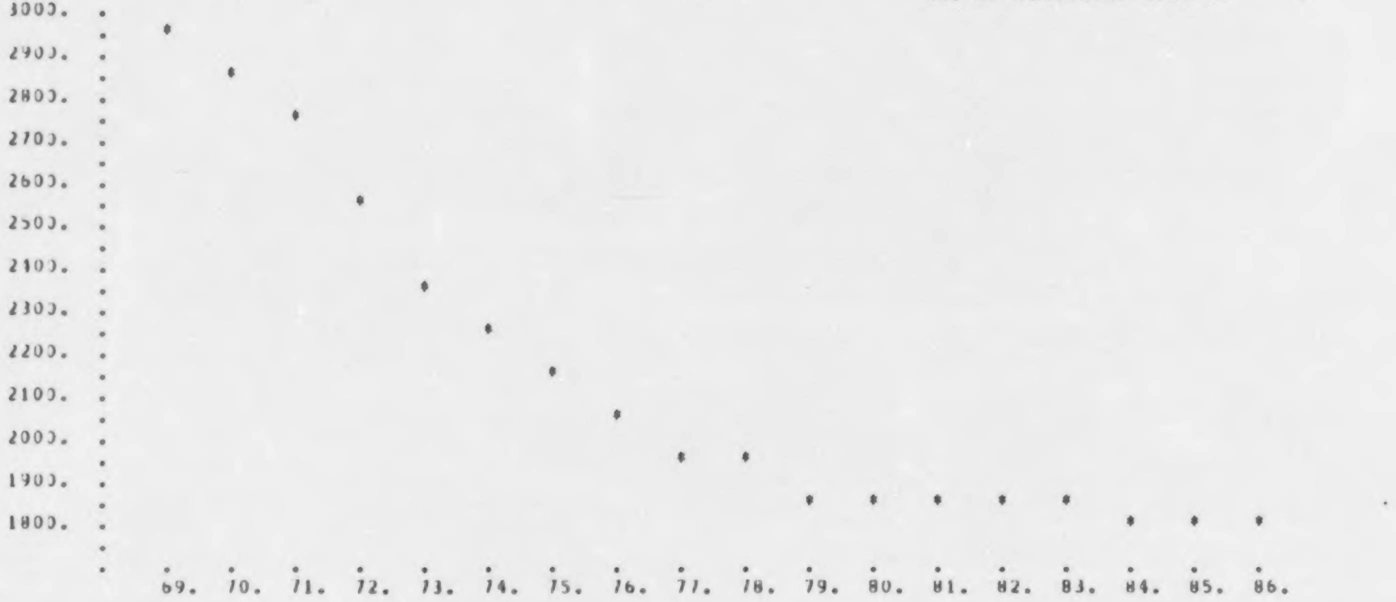
```
NO. OF SCHOOLS     99
NO. OF FRENCH SCHOOLS      5
NO. OF BILINGUAL SCHOOLS      1


YEAR    ENROLMENT   CHANGE   PERCENT CHANGE


1969     40047.
1970     39910.       -137.      -0.34210
1971     39285.       -625.      -1.56602
1972     38388.       -897.      -2.28331
1973     37190.      -1198.      -3.12077
1974     36293.       -897.      -2.41194
1975     35844.       -449.      -1.23715
1976     34958.       -886.      -2.47182
1977     33511.      -1447.      -4.13925
1978     32540.       -971.      -2.89755
1979     31622.       -918.      -2.82114
1980     30749.       -873.      -2.76074
1981     30044.       -705.      -2.29275
1982     28956.      -1088.      -3.62135
1983     28172.       -784.      -2.70755
1984     27654.       -518.      -1.83871
1985     27288.       -366.      -1.32350
1986     27003.       -285.      -1.04442
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -2.28706%
```

```
RANGE   1147.   SIZE OF INTERVALS    100.   NO. OF INTERVALS    12        BOARD 7-E
```

```
                         ENROLMENT BY YEAR                 NO. OF SCHOOLS    11
                                                           NO. OF FRENCH SCHOOLS      0
                                                           NO. OF BILINGUAL SCHOOLS      0
```

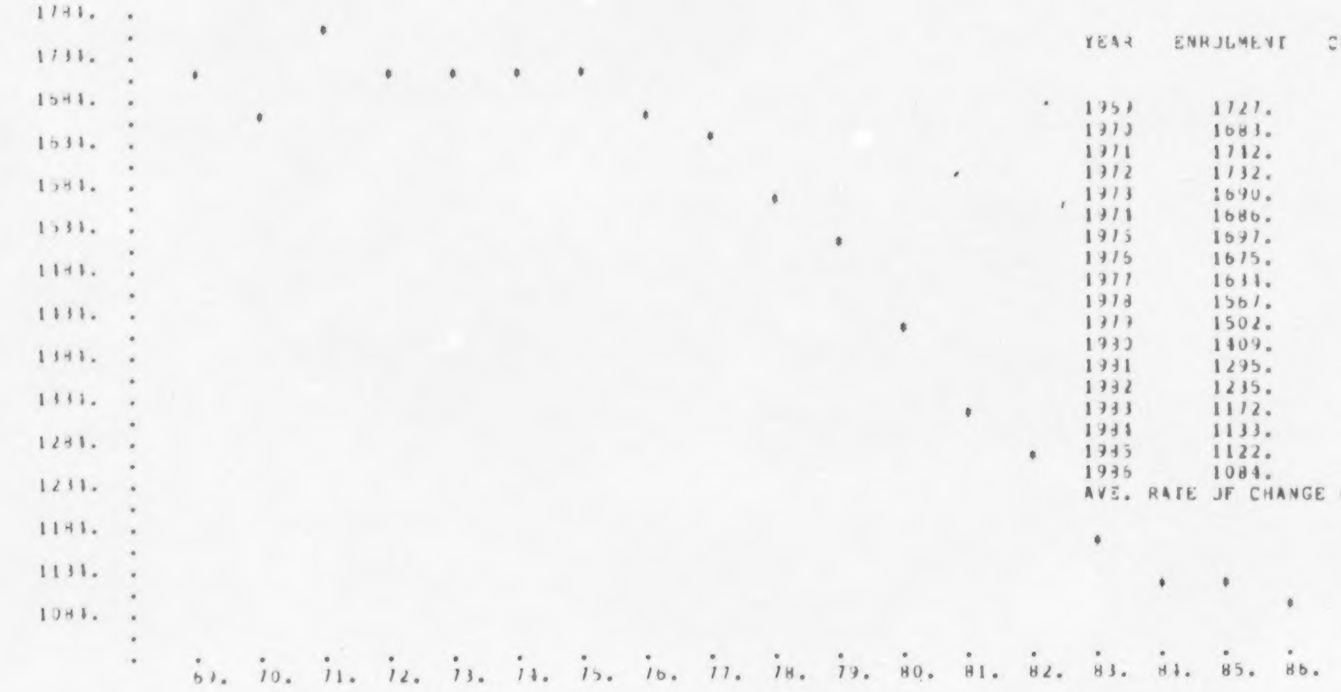


```
YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969      2947.
1970      2862.       -85.     -2.88429
1971      2726.      -136.     -4.75192
1972      2593.      -133.     -4.87894
1973      2398.      -195.     -7.52025
1974      2286.      -112.     -4.67056
1975      2195.       -91.     -3.98075
1976      2089.      -106.     -4.82915
1977      1986.      -103.     -4.93059
1978      1917.       -69.     -3.47432
1979      1868.       -49.     -2.55608
1980      1837.       -31.     -1.65953
1981      1829.        -8.     -0.43549
1982      1808.       -21.     -1.14817
1983      1805.        -3.     -0.16593
1984      1800.        -5.     -0.27701
1985      1800.         0.      0.00000
1986      1800.         0.      0.00000
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -2.833128
```

```
                                                                                  BOARD 7-5
RANGE    658.   SIZE OF INTERVALS     50.   NO. OF INTERVALS    14


                                                                                  NO. OF SCHOOLS       2
                                                 ENROLMENT BY YEAR                NO. OF FRENCH SCHOOLS       0
                                                                                  NO. OF BILINGUAL SCHOOLS       0
```

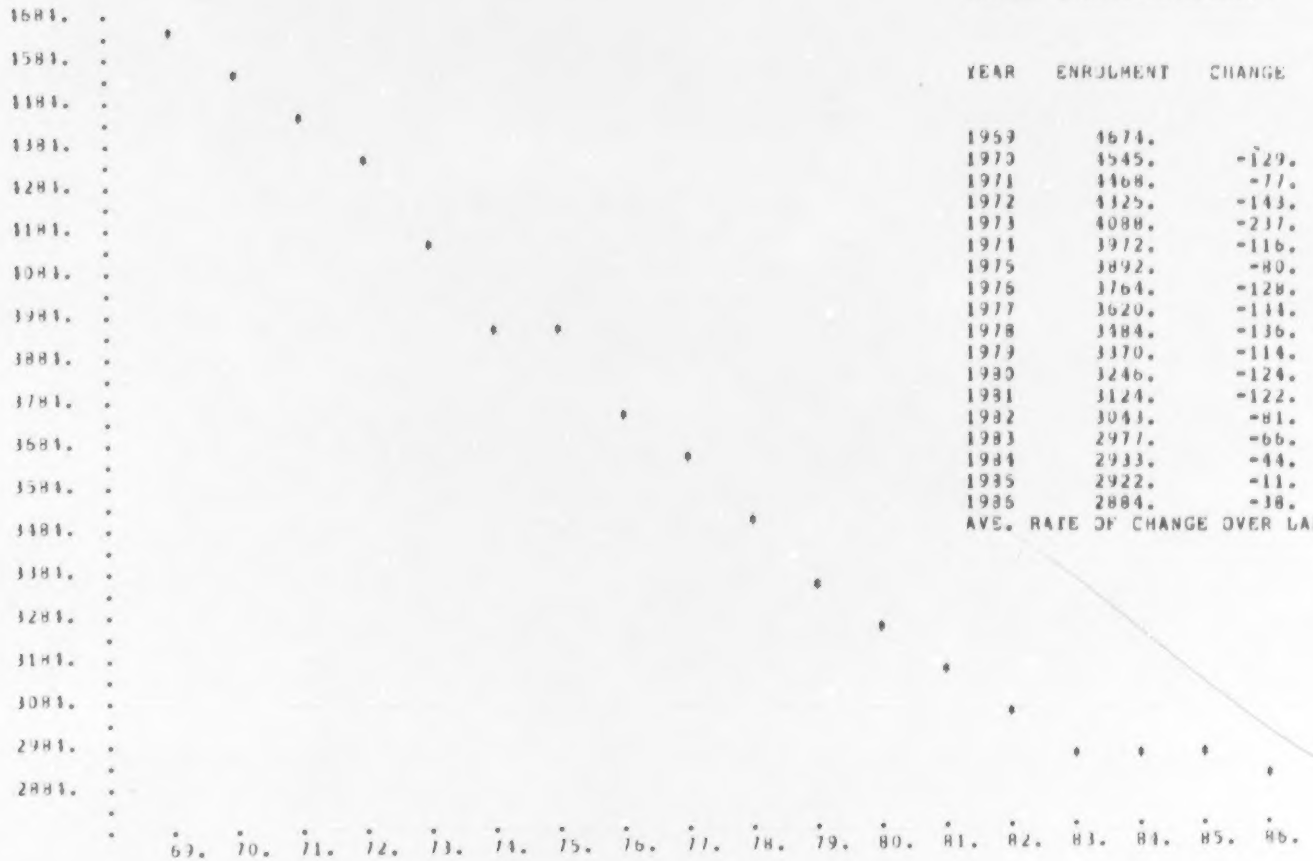


```
YEAR   ENROLMENT   CHANGE   PERCENT CHANGE

1969      1727.
1970      1683.       -44.      -2.54777
1971      1742.        59.       3.50564
1972      1732.       -10.      -0.57405
1973      1690.       -42.      -2.42494
1974      1686.        -4.      -0.23669
1975      1697.        11.       0.65243
1976      1675.       -22.      -1.29641
1977      1634.       -41.      -2.44775
1978      1567.       -67.      -4.10037
1979      1502.       -65.      -4.14805
1980      1409.       -93.      -6.19174
1981      1295.      -114.      -8.09084
1982      1235.       -60.      -4.63320
1983      1172.       -63.      -5.10121
1984      1133.       -39.      -3.32765
1985      1122.       -11.      -0.97087
1986      1084.       -38.      -3.38681
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -2.66590%
```

```
RANGE  1790.   SIZE OF INTERVALS    100.   NO. OF INTERVALS    18          BOARD 7-I
```

ENROLMENT BY YEAR



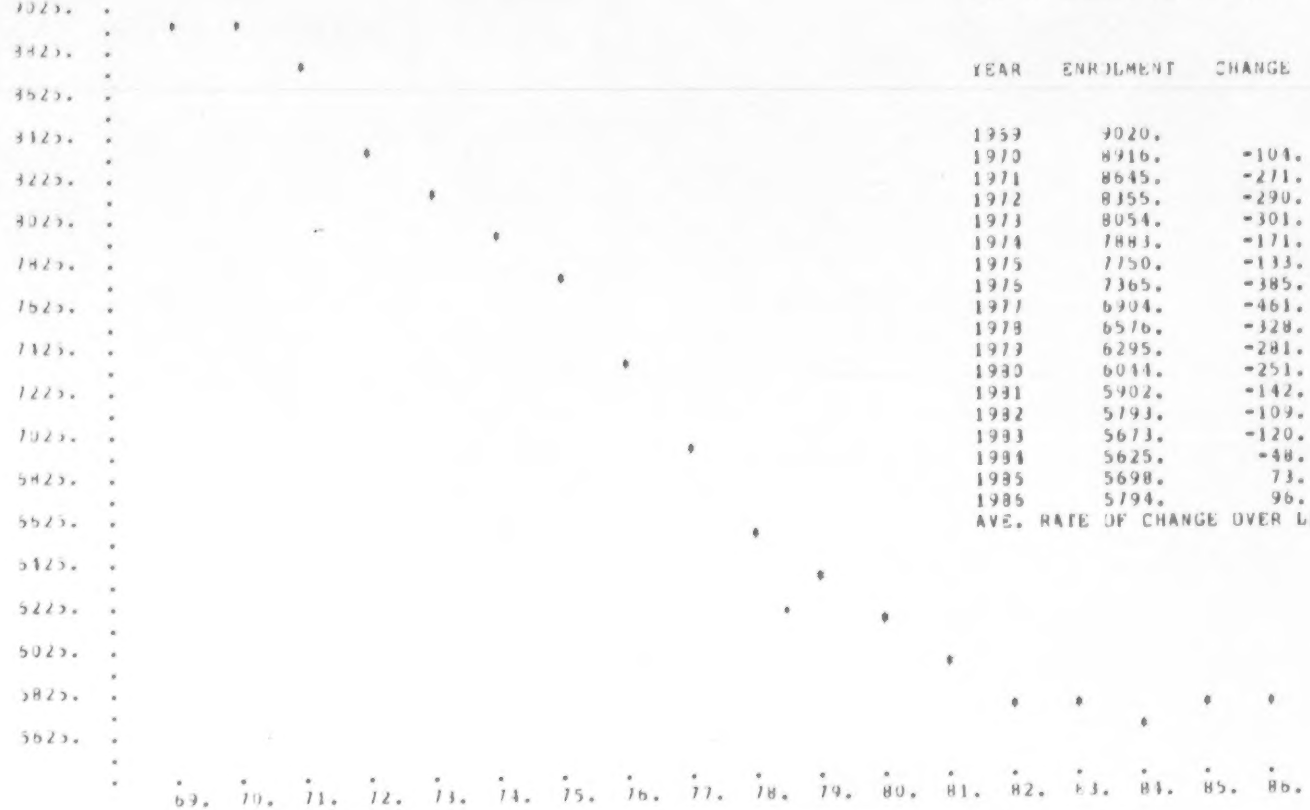
```
NO. OF SCHOOLS     13
NO. OF FRENCH SCHOOLS      0
NO. OF BILINGUAL SCHOOLS      0


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969       4674.
1970       4545.      -129.      -2.75995
1971       4468.       -77.      -1.69417
1972       4325.      -143.      -3.20054
1973       4088.      -237.      -5.47977
1974       3972.      -116.      -2.83757
1975       3892.       -80.      -2.01410
1976       3764.      -128.      -3.28880
1977       3620.      -144.      -3.82572
1978       3484.      -136.      -3.75691
1979       3370.      -114.      -3.27210
1980       3246.      -124.      -3.67953
1981       3124.      -122.      -3.75847
1982       3043.       -81.      -2.59283
1983       2977.       -66.      -2.16891
1984       2933.       -44.      -1.47800
1985       2922.       -11.      -0.37504
1986       2884.       -38.      -1.30048
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -2.79311%
```

```
RANGE   3395.   SIZE OF INTERVALS    200.   NO. OF INTERVALS    17          BOARD B-E
```

ENROLMENT BY YEAR



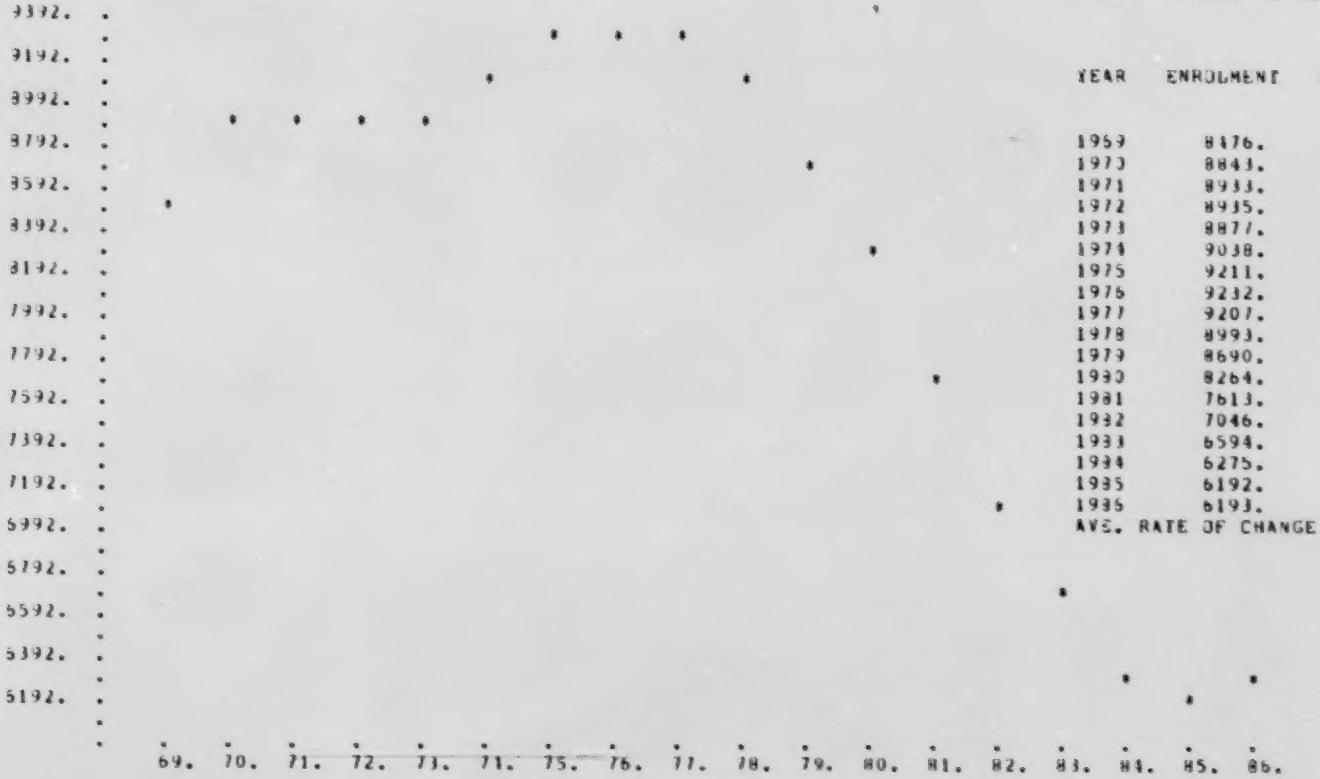
```
NO. OF SCHOOLS     41
NO. OF FRENCH SCHOOLS      0
NO. OF BILINGUAL SCHOOLS      0


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE

1969       9020.
1970       8916.      -104.     -1.15299
1971       8645.      -271.     -3.03949
1972       8355.      -290.     -3.35454
1973       8054.      -301.     -3.60263
1974       7883.      -171.     -2.12317
1975       7750.      -133.     -1.68717
1976       7365.      -385.     -4.96774
1977       6904.      -461.     -6.25933
1978       6576.      -328.     -4.75087
1979       6295.      -281.     -4.27311
1980       6044.      -251.     -3.98729
1981       5902.      -142.     -2.34944
1982       5793.      -109.     -1.84683
1983       5673.      -120.     -2.07147
1984       5625.       -48.     -0.84611
1985       5698.        73.      1.29778
1986       5794.        96.      1.68480
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -2.548808
```

```
RANGE   3040.   SIZE OF INTERVALS    200.   NO. OF INTERVALS    16                    BOARD 8-S
```

```
                                   ENROLMENT BY YEAR
```



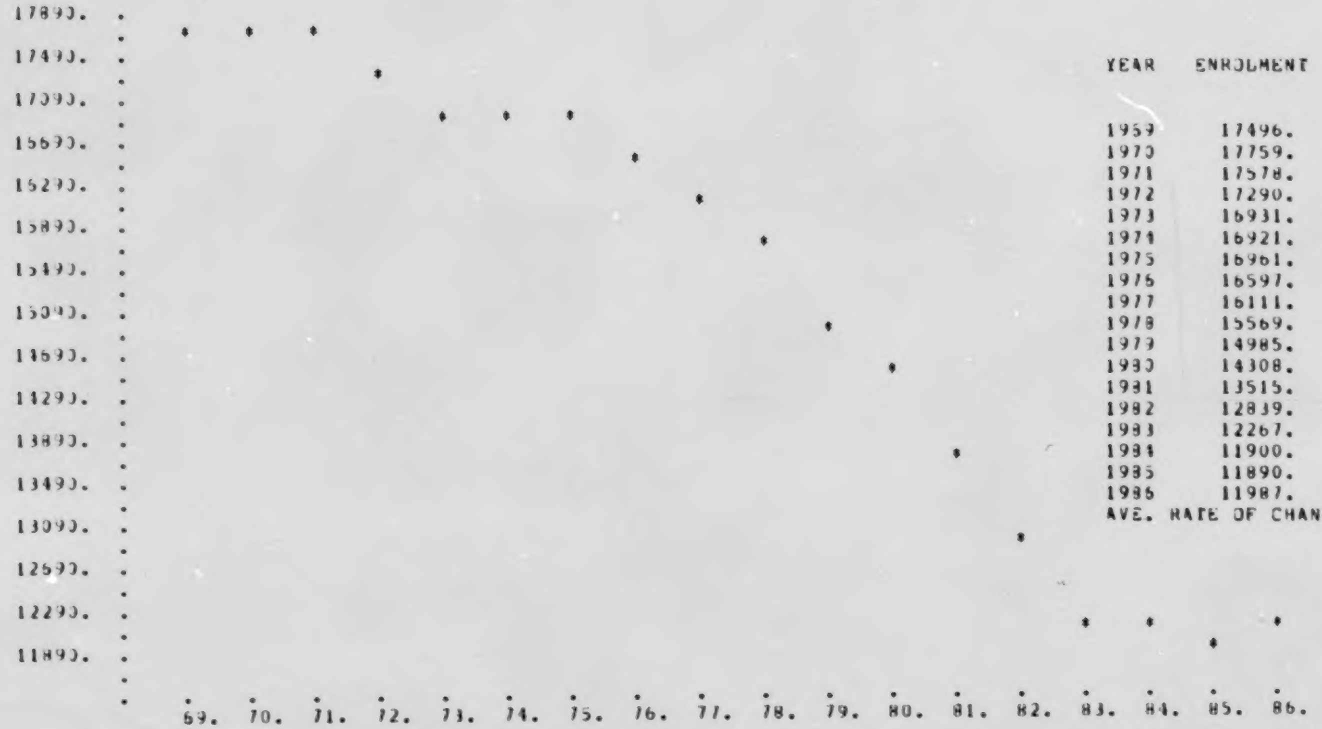
```
NO. OF SCHOOLS     10
NO. OF FRENCH SCHOOLS      1
NO. OF BILINGUAL SCHOOLS      5


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969      8476.
1970      8843.       367.       4.32987
1971      8933.        90.       1.01775
1972      8935.         2.       0.02239
1973      8877.       -58.      -0.64913
1974      9038.       161.       1.81363
1975      9211.       173.       1.91414
1976      9232.        21.       0.22799
1977      9207.       -25.      -0.27080
1978      8993.      -214.      -2.32432
1979      8690.      -303.      -3.36929
1980      8264.      -426.      -4.90219
1981      7613.      -651.      -7.87754
1982      7046.      -567.      -7.44773
1983      6594.      -452.      -6.41499
1984      6275.      -319.      -4.83773
1985      6192.       -83.      -1.32271
1986      6193.         1.       0.01615
AVE. RATE OF CHANGE OVER LAST14YEAR/S  -2.531754
```

```
RANGE   5869.   SIZE OF INTERVALS    400.   NO. OF INTERVALS    15                    BOARD B-I
```

ENROLMENT BY YEAR



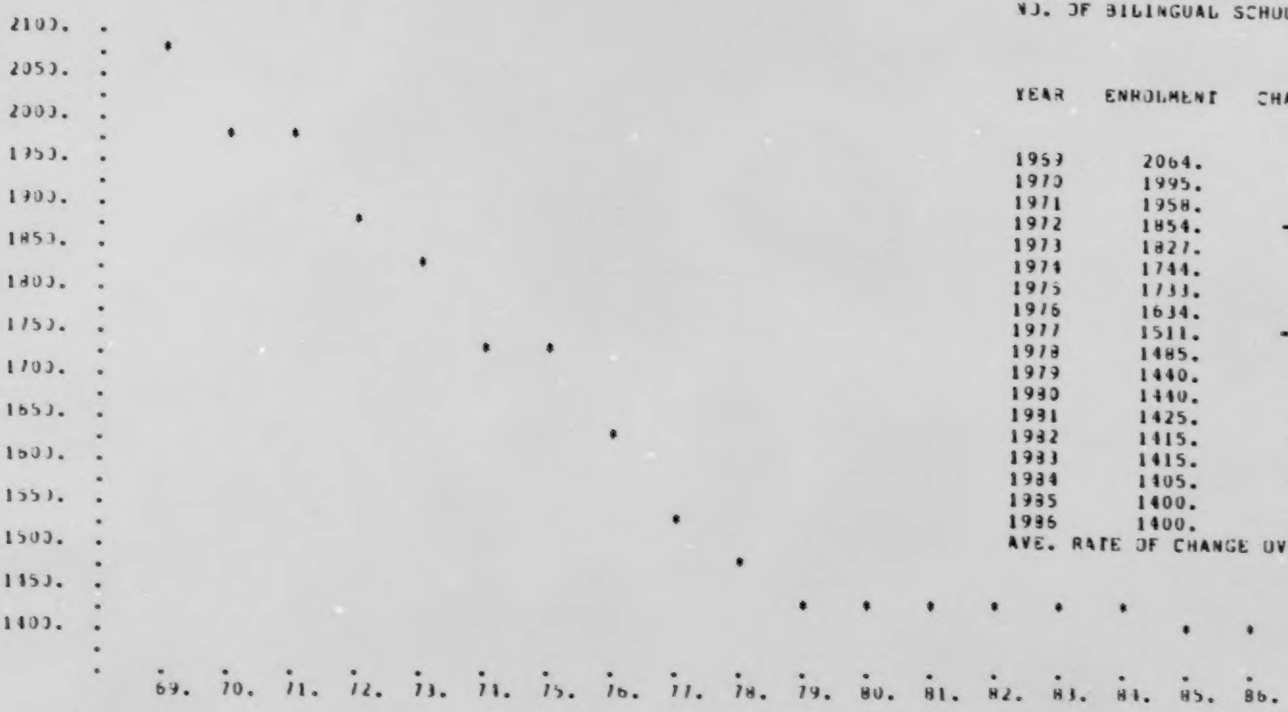
```
NO. OF SCHOOLS     51
NO. OF FRENCH SCHOOLS      1
NO. OF BILINGUAL SCHOOLS      5


YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969      17496.
1970      17759.        263.        1.50320
1971      17578.       -181.       -1.01920
1972      17290.       -288.       -1.63841
1973      16931.       -359.       -2.07634
1974      16921.        -10.       -0.05905
1975      16961.         40.        0.23639
1976      16597.       -364.       -2.14610
1977      16111.       -486.       -2.92824
1978      15569.       -542.       -3.36415
1979      14985.       -584.       -3.75104
1980      14308.       -677.       -4.51785
1981      13515.       -793.       -5.54235
1982      12839.       -676.       -5.00185
1983      12267.       -572.       -4.45518
1984      11900.       -367.       -2.99177
1985      11890.        -10.       -0.08403
1986      11987.         97.        0.81581
AVE. RATE OF CHANGE OVER LAST16YEAR/S  -2.40771%
```

```
RANGE     664.   SIZE OF INTERVALS      50.    NO. OF INTERVALS    14              BOARD 9
```

ENROLMENT BY YEAR



```
NO. OF SCHOOLS      9
NO. OF FRENCH SCHOOLS      5
NO. OF BILINGUAL SCHOOLS      0

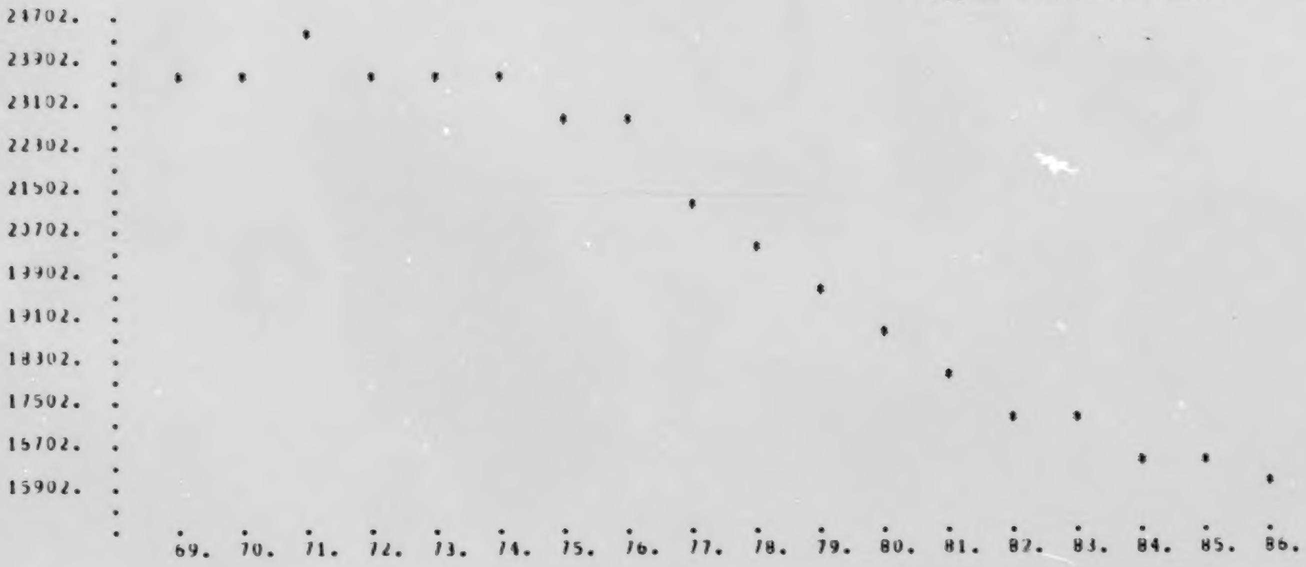
YEAR   ENROLMENT    CHANGE    PERCENT CHANGE

1969      2064.
1970      1995.        -69.        -3.34302
1971      1958.        -37.        -1.85464
1972      1854.       -104.        -5.31154
1973      1827.        -27.        -1.45631
1974      1744.        -83.        -4.54297
1975      1733.        -11.        -0.63073
1976      1634.        -99.        -5.71264
1977      1511.       -123.        -7.52754
1978      1485.        -26.        -1.72071
1979      1440.        -45.        -3.03030
1980      1440.          0.         0.00000
1981      1425.        -15.        -1.04167
1982      1415.        -10.        -0.70175
1983      1415.          0.         0.00000
1984      1405.        -10.        -0.70671
1985      1400.         -5.        -0.35587
1986      1400.          0.         0.00000
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -2.23155%
```

RANGE 8025. SIZE OF INTERVALS 800. NO. OF INTERVALS 11 BOARD 10

ENROLMENT BY YEAR

NO. OF SCHOOLS 58
NO. OF FRENCH SCHOOLS 1
NO. OF BILINGUAL SCHOOLS 0

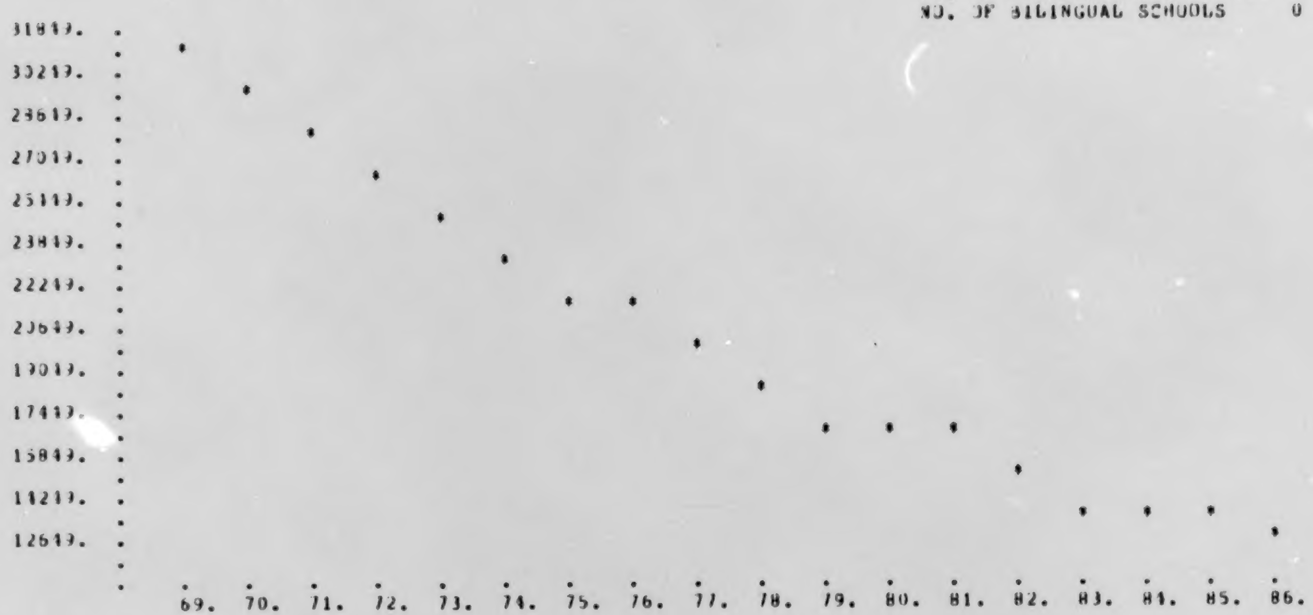


```
YEAR   ENROLMENT   CHANGE   PERCENT CHANGE

1969     23295.
1970     23527.       232.       0.99592
1971     23927.       400.       1.70017
1972     23550.      -377.      -1.57563
1973     23360.      -190.      -0.80679
1974     23137.      -223.      -0.95462
1975     23051.       -86.      -0.37170
1976     22320.      -731.      -3.17123
1977     21453.      -867.      -3.88441
1978     20480.      -973.      -4.53550
1979     19637.      -843.      -4.11621
1980     18706.      -931.      -4.74105
1981     18070.      -636.      -3.39993
1982     17479.      -591.      -3.27061
1983     16958.      -521.      -2.98072
1984     16558.      -400.      -2.35877
1985     16193.      -365.      -2.20437
1986     15902.      -291.      -1.79707
AVE. RATE OF CHANGE OVER LAST15YEAR/S  -2.677914
```

```
RANGE  18060.   SIZE OF INTERVALS   1500.   NO. OF INTERVALS    12        BOARD 11

                         ENROLMENT BY YEAR
                                                 NO. OF SCHOOLS     76
                                                 NO. OF FRENCH SCHOOLS     36
                                                 NO. OF BILINGUAL SCHOOLS     0
```

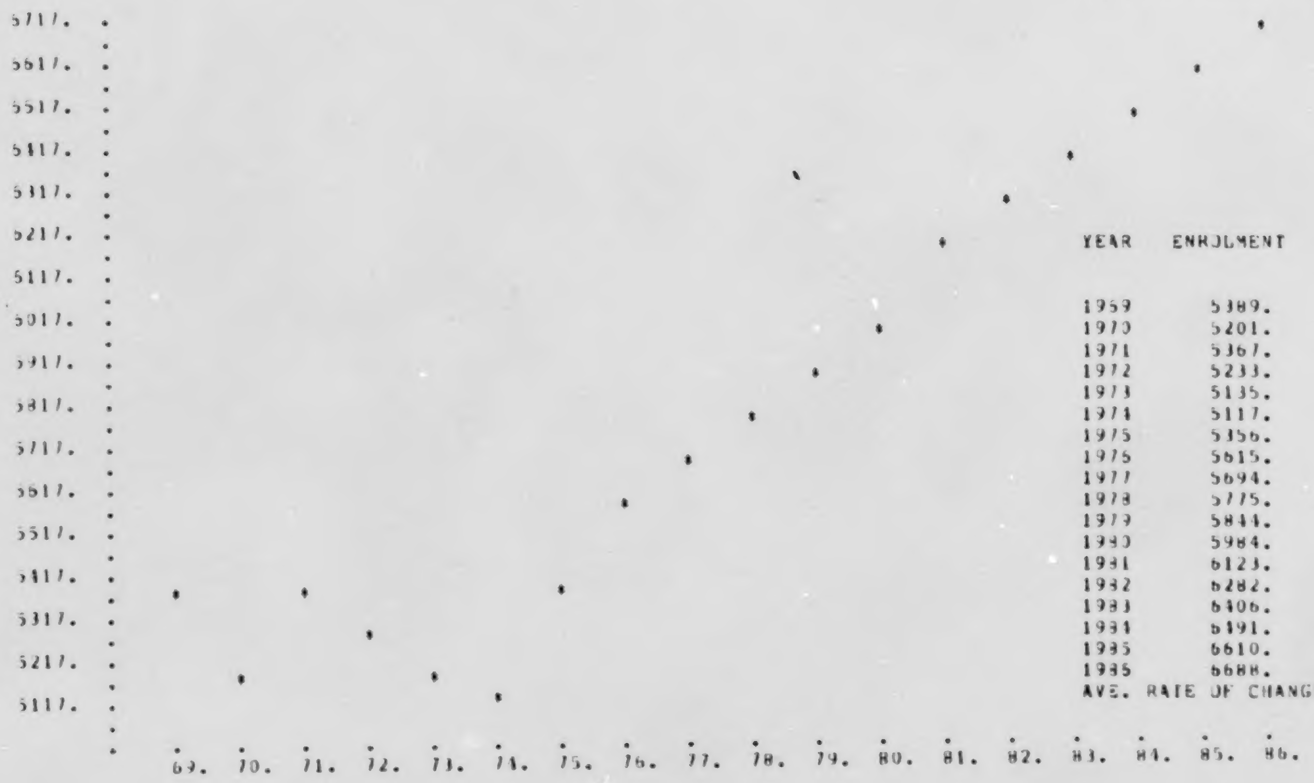


```
YEAR   ENROLMENT   CHANGE   PERCENT CHANGE


1969     30709.
1970     29907.      -802.      -2.61161
1971     28633.     -1274.      -4.25987
1972     26266.     -2367.      -8.26669
1973     24774.     -1492.      -5.68035
1974     23553.     -1221.      -4.92855
1975     22187.     -1366.      -5.79969
1976     20710.     -1477.      -6.65705
1977     19457.     -1253.      -6.05022
1978     18045.     -1412.      -7.25703
1979     16894.     -1151.      -6.37853
1980     16153.      -741.      -4.38617
1981     16014.      -139.      -0.86052
1982     14872.     -1142.      -7.13125
1983     14209.      -663.      -4.45801
1984     13649.      -560.      -3.94115
1985     13107.      -542.      -3.97099
1986     12649.      -458.      -3.49432
AVE. RATE OF CHANGE OVER LAST17YEAR/S  -5.066591
```

```
RANGE   1571.   SIZE OF INTERVALS    100.   NO. OF INTERVALS    16                    BOARD 12

                                                                          NO. OF SCHOOLS    19
                               ENROLMENT BY YEAR                          NO. OF FRENCH SCHOOLS     1
                                                                          NO. OF BILINGUAL SCHOOLS      0
```



```
YEAR   ENROLMENT   CHANGE   PERCENT CHANGE

1969     5389.
1970     5201.      -188.     -3.48859
1971     5367.       166.      3.19169
1972     5233.      -134.     -2.49674
1973     5135.       -98.     -1.87273
1974     5117.       -18.     -0.35054
1975     5356.       239.      4.67071
1976     5615.       259.      4.83570
1977     5694.        79.      1.40695
1978     5775.        81.      1.42255
1979     5844.        69.      1.19481
1980     5984.       140.      2.39562
1981     6123.       139.      2.32285
1982     6282.       159.      2.59577
1983     6406.       124.      1.97389
1984     6491.        85.      1.32688
1985     6610.       119.      1.83331
1985     6688.        78.      1.18003
AVE. RATE OF CHANGE OVER LAST17YEAR/S   1.302546
```

APPENDIX C

Uniform Code of Accounts Data Collection Instrument

Commission on Declining School Enrolments

EFFECTS OF DECLINING ENROLMENTS ON NON-CERTIFICATED STAFF

Directions for Providing Data

Purpose

To collect data necessary to make longitudinal projections as to:

a) numbers of non-certificated staff in various categories
b) ratios of non-certificated staff to students
c) ratios of non-certificated staff to certificated staff
d) estimates of costs of staffing

Method

Categories of staff defined in the Ministry of Education *Uniform Code of Accounts* are being used. Data as to *full-time equivalent* (FTE) *staff in various categories* and the *total cost of salaries and wages* for each category in each of two years are to be entered on each of the accompanying sheets. Data should be provided separately for *Elementary* (E), *Secondary* (S), *Retarded Children's School* (R) if applicable.

Exceptions

If your board's records are not maintained according to the *Uniform Code of Accounts*, please

a) complete the forms as accurately as possible, noting differences in definition, or,
b) provide equivalent data using your categories.

Missing Data

Most important are FTE data for 1976. If earlier data or data on salaries are unavailable at present, please indicate if and when these can be provided.

Questions

Contact: Dr. Steve Lawton, Department of Educational Administration
(416) 923-6641, x437

Deadline: Please return by January 15, 1978 to:

Dr. Stephen B. Lawton
Department of Educational Administration
The Ontario Institute for Studies in Education
252 Bloor Street West
Toronto, Ontario M5S 1V6

Many thanks for your assistance!

Ministry of Education, Ontario

PART	SECTION	PAGE
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DATE ISSUED FEBRUARY 1969		
DATE REVISED OCTOBER 1972		

UNIFORM CODE OF ACCOUNTS

EXPENDITURE ACCOUNTS

FUNCTION...... BUSINESS ADMINISTRATION. ECONOMIC CLASSIFICATION. SALARIES AND WAGES.........

CODE......... 10 ....

ACCOUNT CODE	REF.	NAME	DEFINITION
			NOTE: Expenditures, including salaries and wages for Instruction supervisory and administrative personnel and clerical and secretarial staff providing assistance to them are not to be included in this section. These expenditures should be entered in the accounts under section 3, Instruction.
10020 4	O	Trustees' Honoraria	Honoraria paid to elected officials.
			Gross earnings including holiday pay and overtime of the following personnel:
10030 1	E	Senior Management Personnel	Senior Business Officials - These include the "Secretary-Treasurer", "Superintendent of Business Affairs" (Business Administrator), "Assistant Superintendent of Business Affairs", the heads and deputies of the Legal, Comptroller's and Public Relation Departments, and where applicable, the Superintendent of the combined Plant Maintenance and Plant Operations Department.
10030 2	S		
10030 3	R		
10030 4	O		
10050 1	E	Supervisory and Administrative	All Supervisory and Administrative Personnel, full or part-time -- This includes personnel in the Finance, Public Relations and Legal Departments, etc., except those included immediately above.
10050 2	S		
10050 3	R		
10050 4	O		
10070 1	E	Technical and Specialized - Architectural and Engineering	All staff related directly to the Architectural and Engineering Departments.
10070 2	S		
10070 3	R		
10070 4	O		
10090 1	E	Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance to the supervisory and administrative staff and architectural and engineering staff. This includes full or part-time employees.
10090 2	S		
10090 3	R		
10090 4	O		
10390 1	E	Temporary Assistance	Cost of employment agency personnel, and personnel hired on a temporary basis, e.g. not on Board's payroll.
10390 2	S		
10390 3	R		
10390 4	O		

SCHOOL BOARD:

COMMENTS ON
CATEGORY DEFINITIONS

	DECEMBER 31 19 __		DECEMBER 31 1976	
REF	FTE	Salary & Wage ($1000's)	FTE	Salary & Wage ($1000's)
O				
E S R				
E S R				
E S R				
E S R O				
E S R				

ONTARIO DEPARTMENT OF EDUCATION

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UNIFORM CODE OF ACCOUNTS

EXPENDITURE ACCOUNTS

FUNCTION COMPUTER SERVICES

ECONOMIC CLASSIFICATION SALARIES AND WAGES

CODE 20

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
20030 1	E	Supervisory and Administrative	Supervisory and administrative personnel, but excluding data processing technicians, such as keypunch operators, computer operators and programmers.
20030 2	S		
20030 3	R		
20030 4	O		
20070 1	E	Technical and Specialized - Computer Operations	Personnel related directly to the operation of the computer and ancillary equipment, such as keypunch operators, computer operators, programmers and system analysts.
20070 2	S		
20070 3	R		
20070 4	O		
20090 1	E	Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance to the supervisory and administrative staff and technical and specialized staff. This includes full or part-time employees.
20090 2	S		
20090 3	R		
20090 4	O		
			NOTE: These accounts do not include any certificated personnel who are teaching computer science. They are to be included in "Instruction".
20390 1	E	Temporary Assistance	Cost of employment agency personnel, and all personnel hired on a temporary basis, e.g. personnel not on Board's payroll.
20390 2	S		
20390 3	R		
20390 4	O		

ONTARIO DEPARTMENT OF EDUCATION

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UNIFORM CODE OF ACCOUNTS

EXPENDITURE ACCOUNTS

UNCTION INSTRUCTION

ECONOMIC CLASSIFICATION SALARIES AND WAGES

ODE 30 - 49

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
		Instructional Administration	
32030 1 32030 2 32030 3 32030 4	E S R O	- Senior Management Personnel	Senior Instructional Administration Officials - These include the "Director of Education", "Assistant Director", "Superintendents" and "Assistant Superintendents of Schools".
32050 1 32050 2 32050 3 32050 4	E S R O	- Supervisory and Administrative	Non-Teaching Supervisory and Administrative Personnel related directly to the instructional programme - These include: Inspectors or Area Superintendents Principals not assigned to a school Directors or Superintendents of Subject Fields Co-Ordinators and Consultants Other similar positions Does not include the personnel whose prime activity is classroom teaching.
32090 1 32090 2 32090 3 32090 4	E S R O	- Clerical and Secretarial	All clerical and secretarial staff required to provide office assistance to the senior management and supervisory and administrative staffs. This includes full or part-time employees.

ONTARIO DEPARTMENT OF EDUCATION

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UNIFORM CODE OF ACCOUNTS
EXPENDITURE ACCOUNTS

UNCTION INSTRUCTION

ECONOMIC CLASSIFICATION SALARIES AND WAGES

ODE 30 - 49

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel.
		School Office Administration	
34090 1 34090 2 34090 3 34090 4	E S R O	- Clerical and Secretarial	Clerical and secretarial staff located in the school offices required to provide office assistance. This excludes non-certificated, secretarial, and clerical staff, who are assigned to the Guidance, Library, Audio-Visual and O.M.R.P. These are included under "Educational Services". Also excluded is the clerical and secretarial staff used for Evening Courses of Study.
34390 1 34390 2 34390 3 34390 4	E S R O	- Temporary Assistance	Cost of employment agency personnel, and all personnel hired on a temporary basis, e.g. personnel not on Board's payroll. This account pertains to all of the sub-functions of Instruction.
		Day School Regular Courses	Personnel directly related to the provision of Day School Regular Courses for school-age children. Personnel may be either certificated or non-certificated. They are located in the schools. They include:
		Instructional Personnel	
36100 1 36100 2 36100 3 36100 4	E S R O	- Principals and Vice-Principals	Principals Vice-Principals

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UNIFORM CODE OF ACCOUNTS

EXPENDITURE ACCOUNTS

FUNCTION INSTRUCTION

ECONOMIC CLASSIFICATION SALARIES AND WAGES

CODE 30 - 49

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
		Instructional Personnel (Continued)	
36200 1 36200 2 36200 3 36200 4	E S R O	- Teachers	Regular Teachers Part-time Teachers Supply Teachers, Etc.
36300 1 36300 2 36300 3 36300 4	E S R O	- Other Instructional	Guidance and Library Personnel possessing teaching certificates Lay Assistants, Etc.
			NOTE: Salaries and Wages for Special Education, Special Courses, Evening Courses, O.M.R.P. and Retarded Children are not included under the above sub-function.
		Special Education	Personnel directly related to the provision of Day School Special Education Courses as those set forth in section 46 of Ontario Regulation 339/66, as amended, and include such classes as Hard of Hearing, Speech Correction, Limited Visiion, etc. The personnel may be either certificated or non-certificated. They are located in the schools and are involved in classroom instruction. They include:
		Instructional Personnel	
38100 1 38100 2 38100 3 38100 4	E S R O	- Principals and Vice-Principals	Principals Vice-Principals

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UNIFORM CODE OF ACCOUNTS

EXPENDITURE ACCOUNTS

UNCTION INSTRUCTION

ECONOMIC CLASSIFICATION SALARIES AND WAGES

ODE 30 - 49

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
		Instructional Personnel (Continued)	
38200 1	E	- Teachers	Regular Teachers
38200 2	S		Part-time Teachers
38200 3	R		Supply Teachers, Etc.
38200 4			
38300 1	E	- Other	Lay Assistants
38300 2	S		Other certificated personnel in the school
38300 3	R		
38300 4			

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ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
		Audio-Visual	
52050 1	E	- Supervisory and Administrative	Supervisory and administrative personnel.
52050 2	S		
52050 3	R		
52050 4	O		
52070 1	E	- Technical and Specialized	Personnel who regularly perform the technical duties of the department.
52070 2	S		
52070 3	R		
70 4	O		
52090 1	E	- Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance to the supervisory and administrative staff. This includes full or part-time employees.
52090 2	S		
52090 3	R		
52090 4	O		
		Guidance and Counselling	
54050 1	E	- Supervisory and Administrative	Supervisory and administrative personnel, but excluding all certificated personnel in the school. Specialists in Guidance and Counselling are included below.
54050 2	S		
54050 3	R		
54050 4	O		
54070 1	E	- Technical and Specialized	Non-certificated personnel who are specialists in guidance and counselling. Certificated personnel in the school involved in this field are included under "Instruction".
54070 2	S		
54070 3	R		
54070 4	O		
54090 1	E	- Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance to the supervisory and administrative staff. This includes full or part-time employees.
54090 2	S		
54090 3	R		
54090 4	O		

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EXPENDITURE ACCOUNTS

UNCTION EDUCATIONAL SERVICES ECONOMIC CLASSIFICATION SALARIES AND WAGES

ODE 50 - 59

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
		Library	
56050 1	E	- Supervisory and Administrative	Supervisory and administrative personnel, but excluding all certificated personnel in the school. Certificated personnel who are involved in this field are included under "Instruction".
56050 2	S		
56050 3	R		
56050 4	O		
56070 1	E	- Technical and Specialized	Non-certificated personnel who are specialists in the library field, such as librarians without teaching certificates.
56070 2	S		
56070 3	R		
56070 4	O		
56090 1	E	- Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance to the supervisory and administrative staff. This includes full or part-time employees.
56090 2	S		
56090 3	R		
56090 4	O		
		Psychological	
58050 1	E	- Supervisory and Administrative	Supervisory and administrative personnel. Does not include specialists such as psychiatrists, psychologists and school social workers who are not supervisory and administrative personnel. These are included below.
58050 2	S		
58050 3	R		
58050 4	O		
58070 1	E	- Technical & Specialized	Personnel who regularly perform the technical duties of the psychological department. (e.g. psychological testing).
58070 2	S		
58070 3	R		
58070 4	O		
58090 1	E	- Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance to the supervisory and administrative staff. This includes full or part-time employees.
58090 2	S		
58090 3	R		
58090 4	O		

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JNCTION EDUCATIONAL SERVICES

ECONOMIC CLASSIFICATION SALARIES AND WAGES

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ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
		Other	
59050 1	E	- Supervisory and Administrative	Other supervisory and administrative personnel related directly to Educational Services. This would include such activities as "Examinations", "Research and Experimentation", etc.
59050 2	S		
59050 3	R		
59050 4	O		
59070 1	E	- Technical and Specialized	Technical and specialized personnel directly related to this services activity other than included in "Other - Supervisory and Administrative Personnel".
[illegible]070 2	S		
070 3	R		
59070 4	O		
59090 1	E	- Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance to the supervisory and administrative staff. This includes full or part-time employees.
59090 2	S		
59090 3	R		
59090 4	O		
		Educational Services	
59390	E	- Temporary Assistance	Cost of employment agency personnel, and all personnel hired on a temporary basis, e.g. personnel not on Board's payroll. This account pertains to all of the sub-functions of Educational Services.
59390	S		
59390	R		
59390	O		

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EXPENDITURE ACCOUNTS

FUNCTION ATTENDANCE, HEALTH & FOOD SERVICES ECONOMIC CLASSIFICATION SALARIES AND WAGES

CODE 60 - 69

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
		Attendance	
62050 1	E	- Supervisory and Administrative	Supervisory and administrative personnel, but excluding those related directly to the provision of the attendance service such as attendance officers.
62050 2	S		
62050 3	R		
62050 4	O		
62070 1	E	- Technical and Specialized	Non-certificated personnel related directly to the provision of the attendance service such as attendance officers.
62070 2	S		
62070 3	R		
62070 4	O		
62090 1	E	- Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance. This includes full or part-time employees.
62090 2	S		
62090 3	R		
62090 4	O		
62390 1	E	Temporary Assistance	Cost of employment agency personnel, and all personnel hired on a temporary basis, e.g. personnel not on Board's payroll. This account pertains to all of the sub-functions of Attendance, Health and Food Services.
62390 2	S		
62390 3	R		
62390 4	O		
		Health	
64050 1	E	- Supervisory and Administrative	Supervisory and administrative personnel but excluding all certificated personnel and those directly related to the provision of the health services, such as doctors, nurses and dentists.
64050 2	S		
64050 3	R		
64050 4	O		
64070 1	E	- Technical and Specialized	Personnel related directly to the provision of health services. These include doctors, nurses and dentists. Certificated personnel who are teaching this subject are included under "Instruction".
64070 2	S		
64070 3	R		
64070 4	O		
64090 1	E	- Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance. This includes full or part-time employees.
64090 2	S		
64090 3	R		
64090 4	O		

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UNCTION ATTENDANCE, HEALTH & FOOD SERVICES ECONOMIC CLASSIFICATION SALARIES AND WAGES

ODE

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
		Food Services	
66050 1	E	- Supervisory and Administrative	Supervisors and administrative personnel, but excluding personnel related directly to food preparation and serving operation, such as cooks, waitresses, dishwashers and dieticians.
66050 2	S		
66050 3	R		
66050 4	O		
66070 1	E	- Technical and Specialized	Personnel related directly to the preparation and serving of food. This includes cooks, waitresses, dishwashers and dieticians whether on a part-time or full-time basis.
66070 2	S		
66070 3	R		
66070 4	O		
66090 1	E	- Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance. This includes full or part-time employees.
66090 2	S		
66090 3	R		
66090 4	O		

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EXPENDITURE ACCOUNTS

FUNCTION ..... PLANT OPERATION ..... ECONOMIC CLASSIFICATION.. SALARIES AND WAGES ......
CODE ...... 70 ......

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross earnings including holiday pay and overtime of the following personnel.
70050 1 70050 2 70050 3 70050 4	E S R 0	Supervisory and Administrative	Supervisors and Administrative Personnel - This includes the Superintendent of Plant Operations, but excludes personnel performing plant operation functions such as caretakers and stationary engineers. Where, in addition to the Superintendents of Plant Operations and Plant Maintenance, there is an administrative supervisor of the combined Operations and Maintenance functions, the cost is to be included under "Business Administration."
70070 1 70070 2 70070 3 70070 4	E S R 0	Technical and Specialized	Personnel related directly to "Plant Operations" -- These include caretakers and stationary engineers whether on a part-time or full-time basis.
70090 1 70090 2 70090 3 70090 4	E S R 0	Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance to the supervisory and administrative staff. This includes full or part-time employees.
70390 1 70390 2 70390 3 70390 4	E S R 0	Temporary Assistance	Cost of employment agency personnel and all personnel hired on a temporary basis, e.g., personnel not on Board's payroll.

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EXPENDITURE ACCOUNTS

FUNCTION PLANT MAINTENANCE

ECONOMIC CLASSIFICATION SALARIES AND WAGES

CODE 75

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
75050 1	E	Supervisory and Administrative	Superintendent of Maintenance, supervisors, foremen, building inspectors, administrative personnel excluding secretarial and clerical staff.
75050 2	S		
75050 3	R		
75050 4	O		
			Personnel who relate to the operational activities of the Plant Maintenance Department such as plumbers, carpenters, electricians and painters, are to be included in "Technical and Specialized Personnel" below.
75070 1	E	Technical and Specialized	Personnel related directly to "Plant Maintenance". These include plumbers, carpenters, electricians and painters whether on a part-time or full-time basis.
75070 2	S		
75070 3	R		
75070 4	O		
75090 1	E	Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance to the supervisory and administrative staff. This includes full or part-time employees.
75090 2	S		
75090 3	R		
75090 4	O		
75390 1	E	Temporary Assistance	Cost of employment agency personnel, and all personnel hired on a temporary basis, e.g. personnel not on Board's payroll.
75390 2	S		
75390 3	R		
75390 4	O		
			NOTE: The costs of the Architectural and Engineering Departments are included under the function "Business Administration".

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EXPENDITURE ACCOUNTS

FUNCTION... TRANSPORTATION ECONOMIC CLASSIFICATION.. SALARIES AND WAGES

CODE... 76 - 81

ACCOUNT CODE	REF.	NAME	DEFINITION
			Gross Earnings including holiday pay and overtime of the following personnel:
		Administration	
76050 1 76050 2 76050 3 76050 4	E S R O	Supervisory and Administrative	Supervisors and Administrative Personnel such as a Transportation officer(s) but excludes personnel engaged in the operation and maintenance of buses. Where an individual performs administrative or supervisory duties for other functions as well as transportation, his salary may be prorated and allocated between the applicable functions (see Note, Part II, Section 3, Page 10).
76090 1 76090 2 76090 3 76090 4	E S R O	Clerical and Secretarial	Clerical and secretarial staff required to provide office assistance to the supervisory and administrative staff. This includes full or part-time employees.
76390 1 76390 2 76390 3 76390 4	E S R O	Temporary Assistance	Cost of employment agency personnel, and all personnel hired on a temporary basis, e.g. personnel not on Board's payroll.

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EXPENDITURE ACCOUNTS

FUNCTION. TRANSPORTATION ECONOMIC CLASSIFICATION.... SALARIES & WAGES

CODE 76-81

ACCOUNT CODE	REF.	NAME	DEFINITION
		Home-School	
77070 1	E	Technical and Specialized	
77070 2	S		
77070 3	R		Technical and Specialized
77070 4	O		Includes salaries and wages of personnel related directly to transportation of pupils, such as bus drivers and mechanics whether on a part-time or full-time basis.
		Home to Ontario Schools for the Deaf or Blind	
78070 1	E	Technical and Specialized	
78070 2	S		
78070 3	R		
78070 4	O		
		School to School	NOTE:
80070 1	E	Technical and Specialized	The above definition applies to all sub-functions on this page (see part II Section 3)
80070 2	S		
80070 3	R		
80070 4	O		
81070 1	E	Other	
81070 2	S	Technical and Specialized	
81070 3	R		
81070 4	O		

APPENDIX D

Algorithm for Coding OMERS Age Data

Outlined below is the criterion used in calculating age:

Age in years

= Current Dat (7712) - Birth Datt (YYMM)

= Yrs., Mths.

If Mths. > 6, add 1 to Yrs.

APPENDIX E

Rates of Attrition for Non-Certificated Staff

	Rates of Attrition[†]			
Age	Retirement	Disability	Death	Termination
56	.000	.006	.005	.069
57	.000	.007	.005	.068
58	.000	.007	.006	.066
59	.000	.008	.007	.065
60	.143	.009	.007	.064
61	.185	.010	.008	.063
62	.260	.010	.008	.061
63	.340	.011	.009	.058
64	.510	.012	.010	.055
65	1.000			

[†] Source: Anthony, *et al.* (1976, pp. 84-87).

APPENDIX F

Questionnaire on Staffing Policies and Practices

COMMISSION ON DECLINING SCHOOL ENROLMENTS (CODE)

Effects of Declining Enrolment on Non-Certificated Staff

S. B. Lawton, Principal Investigator
Department of Educational Administration
The Ontario Institute for Studies in Education

Questionnaire on Staffing Policies and Practices

Although statistical data are being collected in order to make projections as to the effect declining enrolments may have on the numbers of staff in various categories, a number of issues cannot be answered by numbers alone. Information as to your board's policies and practices in the following areas are therefore needed. NOTE: IF YOU PREFER, A PHONE INTERVIEW ON THIS TOPIC CAN BE ARRANGED BY CONTACTING ME AT (416) 923-6641, x437.

BOARD: ______________________ NAME AND POSITION OF RESPONDENT(S) ______________________

____

Allocation of Non-Certificated Staff

How are the following categories of non-certificated staff allocated to schools and other units? Are formulae used? If so, please describe briefly, or attach a copy of the board guidelines or policies (codes refer to the MOE Uniform Code of Accounts).

School Office Administration - Clerical and Secretarial (34090)

Day-School Regular Courses - Lay Assistants (36300)

Audio-Visual - Technical and Specialized (52070)

Guidance and Counselling - Technical and Specialized (54070)

Library - Technical and Specialized (56050)

Psychological Services - Technical and Specialized (58050)

Attendance - Technical and Specialized (62070)

Health - Technical and Specialized (64050)

Food Services - Technical and Specialized (66070)
(e.g., cooks, dishwashers, dieticians, etc.)

Plant Operations - Technical and Specialized (70070)
(e.g., caretakers, and stationary engineers)

Plant Maintenance - Technical and Specialized (75070)
(e.g., plumbers, carpenters, electricians, painters)

Contractural Agreements

Do you have union contracts with any of the staff categories named below? If so, please indicate which categories with a check mark. (Please forward a copy of the contract(s).)

______ School Office Administration - Clerical and Secretarial (34090)
______ Day-School Regular Courses - Lay Assistants (36300)
______ Audio-Visual - Technical and Specialized (52070)
______ Guidance and Counselling - Technical and Specialized (54070)
______ Library - Technical and Specialized (56050)
______ Psychological Services - Technical and Specialized (58050)
______ Attendance - Technical and Specialized (62070)
______ Health - Technical and Specialized (64050)
______ Food Services - Technical and Specialized (66070)
______ Plant Operations - Technical and Specialized (70070)
______ Plant Maintenance - Technical and Specialized (75070)
______ Other ____

____

Terminations

Has non-certificated staff been reduced in size through a policy of attrition adopted as a direct or indirect response to financial stringencies in your board? Please explain.

Have any non-certificated staff been dismissed due directly or indirectly to financial stringencies in your board? Please indicate the categories and number of full-time-equivalent positions involved in the past 12 months.

Terminations (Continued)

To what extent are the financial stringencies which caused the terminations or attrition the result of declining enrolments? That is, if enrolments had been steady, would the board have had sufficient revenue to maintain some or all of these positions?

What changes in the grant structure would moderate the difficulties noted above, assuming that the total amount of funds allocated for elementary and secondary education remains the same?

Comments and Issues

Do you have any comments to make regarding the topic of this investigation? Are there issues we have not touched upon which you feel should be included in the study?

Many thanks for your cooperation. Please return the questionnaire about allocation formulae and contracts to the address below before January 15, 1978.

Dr. Stephen B. Lawton
Department of Educational Administration
The Ontario Institute for Studies in Education
252 Bloor Street West
Toronto, Ontario
M5S 1V6

(416) 923-6641, x437

APPENDIX G

Staffing Ratios by Type of Position

BOARD 1-E

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1970	1976	%DIFF	1970	1976	%DIFF	1970	1976	%DIFF	1976
NC : ADMINISTRATION	27.60	49.00	77.54	—	1.58	—	0.04	0.08	112.05	0.33
NC : TECHNICAL	801.40	675.00	-15.77	—	21.77	—	1.12	1.12	0.60	4.59
NC : CLERICAL&SECRET	391.30	329.00	-15.92	—	10.61	—	0.54	0.55	0.42	2.24
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	98.60	51.00	-48.28	0.00	0.00	0.00	0.14	0.08	-38.22	0.35
C : TEACHERS	0.00	3049.00	0.00	0.00	0.00	0.00	0.00	5.37	0.00	20.74

BOARD 1-S

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1970	1976	%DIFF	1970	1976	%DIFF	1970	1976	%DIFF	1976
NC : ADMINISTRATION	17.00	45.00	164.71	—	2.06	—	0.05	0.12	137.54	0.88
NC : TECHNICAL	610.10	589.00	-3.46	—	26.98	—	1.88	1.63	-13.37	11.55
NC : CLERICAL&SECRET	290.40	283.00	-2.55	—	12.96	—	0.89	0.78	-12.55	5.55
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	29.60	31.00	4.73	0.00	0.00	0.00	0.09	0.09	-6.02	0.61
C : TEACHERS	0.00	2152.00	0.00	0.00	0.00	0.00	0.00	5.94	0.00	42.20

BOARD 1-T

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1970	1976	%DIFF	1970	1976	%DIFF	1970	1976	%DIFF	1976
NC : ADMINISTRATION	44.60	94.00	110.76	0.79	1.78	123.84	0.04	0.10	128.22	0.47
NC : TECHNICAL	1411.50	1264.00	-10.45	25.15	23.92	-4.89	1.35	1.31	-3.03	6.38
NC : CLERICAL&SECRET	681.70	612.00	-10.22	12.15	11.58	-4.65	0.65	0.63	-2.79	3.09
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	10.70	17.00	58.88	0.19	0.32	68.74	0.01	0.02	72.04	0.09
C : ADMINISTRATION	128.20	82.00	-36.04	0.00	0.00	0.00	0.12	0.09	-30.74	0.41
C : TEACHERS	5483.20	5201.00	-5.14	0.00	0.00	0.00	5.25	5.40	2.72	26.27

BOARD 2-E

CATEGORIES	FTE			NC:C*100			NC/C:P*100			NC/C:S
	1969	1976	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
NC : ADMINISTRATION	0.50	1.00	100.00	0.09	0.16	72.06	0.00	0.01	138.20	0.02
NC : TECHNICAL	76.70	120.70	57.37	14.15	19.16	35.39	0.48	0.91	87.43	2.62
NC : CLERICAL&SECRET	19.00	36.00	89.47	3.51	5.71	63.01	0.12	0.27	125.67	0.78
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	11.00	0.00	-100.00	0.00	0.00	0.00	0.07	0.00	-100.00	0.00
C : TEACHERS	531.00	630.00	18.64	0.00	0.00	0.00	3.35	4.74	41.31	13.70

BOARD 2-S

CATEGORIES	FTE			NC:C*100			NC/C:P*100			NC/C:S
	1969	1976	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
NC : ADMINISTRATION	0.10	0.00	-100.00	0.02	0.00	-100.00	0.00	0.00	-100.00	0.00
NC : TECHNICAL	91.40	110.50	20.90	19.24	21.25	10.43	1.13	1.20	6.78	13.81
NC : CLERICAL&SECRET	43.00	46.00	6.98	9.05	8.85	-2.28	0.53	0.50	-5.51	5.75
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : TEACHERS	475.00	520.00	9.47	0.00	0.00	0.00	5.85	5.65	-3.31	65.00

BOARD 2-T

CATEGORIES	FTE			NC:C*100			NC/C:P*100			NC/C:S
	1969	1976	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
NC : ADMINISTRATION	10.10	13.50	33.66	0.98	1.17	18.88	0.04	0.06	42.37	0.25
NC : TECHNICAL	168.10	233.20	38.73	16.34	20.16	23.38	0.70	1.03	47.76	4.32
NC : CLERICAL&SECRET	84.50	112.50	33.14	8.21	9.72	18.41	0.35	0.50	41.81	2.08
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	17.00	17.00	0.00	1.65	1.47	-11.06	0.07	0.08	6.51	0.31
C : ADMINISTRATION	23.00	7.00	-69.57	0.00	0.00	0.00	0.10	0.03	-67.58	0.13
C : TEACHERS	1006.00	1150.00	14.31	0.00	0.00	0.00	4.20	5.11	21.76	21.30

BOARD 3-E

CATEGORIES	FTE 1969	FTE 1976	FTE %DIFF	NC:C*100 1969	NC:C*100 1976	NC:C*100 %DIFF	NC/C:P*100 1969	NC/C:P*100 1976	NC/C:P*100 %DIFF	NC/C:S 1976
NC : ADMINISTRATION	8.00	11.00	37.50	1.74	2.41	38.10	0.07	0.12	65.83	0.29
NC : TECHNICAL	86.00	98.00	13.95	18.74	21.44	14.45	0.78	1.08	37.43	2.58
NC : CLERICAL&SECRET	8.50	13.50	58.82	1.85	2.95	59.52	0.08	0.15	91.54	0.36
NC : TEMPORARYASSIST	15.50	26.00	67.74	3.38	5.69	68.48	0.14	0.29	102.30	0.68
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	5.00	5.00	0.00	0.00	0.00	0.00	0.05	0.05	20.60	0.13
C : TEACHERS	454.00	452.00	-0.44	0.00	0.00	0.00	4.13	4.96	20.07	11.89

BOARD 3-S

CATEGORIES	FTE 1969	FTE 1976	FTE %DIFF	NC:C*100 1969	NC:C*100 1976	NC:C*100 %DIFF	NC/C:P*100 1969	NC/C:P*100 1976	NC/C:P*100 %DIFF	NC/C:S 1976
NC : ADMINISTRATION	9.50	10.50	10.53	2.56	2.54	-0.85	0.15	0.15	-1.97	1.50
NC : TECHNICAL	81.00	123.50	52.59	21.86	29.93	36.89	1.31	1.77	35.34	17.66
NC : CLERICAL&SECRET	39.50	50.00	26.58	10.66	12.11	13.56	0.64	0.72	12.27	7.14
NC : TEMPORARYASSIST	1.00	2.50	150.00	0.27	0.61	124.27	0.02	0.04	121.73	0.36
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	4.00	5.00	25.00	0.00	0.00	0.00	0.06	0.07	10.86	0.71
C : TEACHERS	366.50	408.00	11.32	0.00	0.00	0.00	5.93	5.86	-1.27	58.29

BOARD 3-T

CATEGORIES	FTE 1969	FTE 1976	FTE %DIFF	NC:C*100 1969	NC:C*100 1976	NC:C*100 %DIFF	NC/C:P*100 1969	NC/C:P*100 1976	NC/C:P*100 %DIFF	NC/C:S 1976
NC : ADMINISTRATION	17.50	21.50	22.86	2.11	2.47	16.87	0.10	0.13	31.18	0.48
NC : TECHNICAL	167.00	221.50	32.69	20.13	25.41	26.23	0.97	1.38	41.69	4.92
NC : CLERICAL&SECRET	48.00	63.50	32.29	5.79	7.28	25.84	0.28	0.39	41.26	1.41
NC : TEMPORARYASSIST	16.50	28.50	72.73	1.99	3.27	64.31	0.10	0.18	84.43	0.63
NC : TRUSTEES	17.00	18.00	5.88	2.05	2.06	0.72	0.10	0.11	13.06	0.40
C : ADMINISTRATION	9.00	10.00	11.11	0.00	0.00	0.00	0.05	0.06	18.64	0.22
C : TEACHERS	820.50	862.00	5.06	0.00	0.00	0.00	4.78	5.36	12.18	19.16

BOARD S-E

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1971	1976	%DIFF	1971	1976	%DIFF	1971	1976	%DIFF	1976
NC : ADMINISTRATION	10.70	10.00	-6.54	1.96	1.67	-14.70	0.08	0.08	2.01	0.25
NC : TECHNICAL	88.10	89.40	1.48	16.11	14.92	-7.38	0.67	0.74	10.76	2.23
NC : CLERICAL&SECRET	30.10	52.00	72.76	5.50	8.68	57.68	0.23	0.43	88.56	1.30
NC : TEMPORARYASSIST	1.50	1.00	-33.33	0.27	0.17	-39.15	0.01	0.01	-27.23	0.02
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	4.00	4.40	10.00	0.00	0.00	0.00	0.03	0.04	20.06	0.11
C : TEACHERS	542.80	594.70	9.56	0.00	0.00	0.00	4.11	4.92	19.59	14.87

BOARD S-S

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1971	1976	%DIFF	1971	1976	%DIFF	1971	1976	%DIFF	1976
NC : ADMINISTRATION	11.80	8.10	-31.36	2.78	2.01	-27.66	0.17	0.12	-29.86	1.35
NC : TECHNICAL	73.20	55.40	-24.32	17.25	13.76	-20.24	1.06	0.82	-22.67	9.23
NC : CLERICAL&SECRET	43.30	43.40	0.23	10.20	10.78	5.63	0.63	0.64	2.42	7.23
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	4.00	2.60	-35.00	0.00	0.00	0.00	0.06	0.04	-33.58	0.43
C : TEACHERS	420.40	400.10	-4.83	0.00	0.00	0.00	6.10	5.93	-2.75	66.68

BOARD S-T

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1971	1976	%DIFF	1971	1976	%DIFF	1971	1976	%DIFF	1976
NC : ADMINISTRATION	22.50	18.10	-19.56	2.32	1.81	-21.97	0.11	0.10	-14.20	0.39
NC : TECHNICAL	161.30	144.80	-10.23	16.60	14.46	-12.93	0.80	0.77	-4.26	3.15
NC : CLERICAL&SECRET	73.40	95.40	29.97	7.56	9.53	26.07	0.37	0.51	38.62	2.07
NC : TEMPORARYASSIST	1.50	1.00	-33.33	0.15	0.10	-35.34	0.01	0.01	-28.90	0.02
NC : TRUSTEES	16.00	17.00	6.25	1.65	1.70	3.06	0.08	0.09	13.32	0.17
C : ADMINISTRATION	8.00	7.00	-12.50	0.00	0.00	0.00	0.03	0.04	-6.68	0.15
C : TEACHERS	963.40	994.30	3.21	0.00	0.00	0.00	4.79	5.28	10.10	21.62

BOARD 6-E

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1969	1975	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
NC : ADMINISTRATION	1.00	0.00	-100.00	0.09	0.00	-100.00	0.00	0.00	-100.00	0.00
NC : TECHNICAL	152.90	143.00	-6.47	13.56	14.14	4.34	0.60	0.69	15.59	1.72
NC : CLERICAL&SECRET	30.60	55.00	79.74	2.71	5.44	100.52	0.12	0.27	122.14	0.66
NC : TEMPORARYASSIST	4.00	6.00	50.00	0.35	0.59	67.34	0.02	0.03	65.39	0.07
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : TEACHERS	1127.90	1011.00	-10.36	0.00	0.00	0.00	4.43	4.91	10.78	12.18

BOARD 6-S

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1969	1975	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
NC : ADMINISTRATION	2.00	0.00	-100.00	0.21	0.00	-100.00	0.01	0.00	-100.00	0.00
NC : TECHNICAL	187.90	146.50	-22.03	19.39	16.76	-13.57	1.29	1.02	-20.79	9.16
NC : CLERICAL&SECRET	55.70	79.00	41.83	5.75	9.04	57.23	0.38	0.55	44.09	4.94
NC : TEMPORARYASSIST	4.00	1.00	-75.00	0.41	0.11	-72.29	0.03	0.01	-74.60	0.06
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : TEACHERS	968.90	874.00	-9.79	0.00	0.00	0.00	6.64	6.09	-8.36	54.63

BOARD 5-T

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1969	1975	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
NC : ADMINISTRATION	33.00	23.00	-30.30	1.55	1.20	-22.49	0.08	0.07	-20.16	0.23
NC : TECHNICAL	376.30	341.50	-9.25	17.66	17.82	0.93	0.94	0.98	3.96	3.45
NC : CLERICAL&SECRET	135.30	186.00	37.47	6.35	9.71	52.88	0.34	0.53	57.48	1.88
NC : TEMPORARYASSIST	10.00	13.00	30.00	0.47	0.68	44.57	0.02	0.03	48.92	0.13
NC : TRUSTEES	33.00	29.00	-12.12	1.55	1.51	-2.27	0.08	0.08	0.67	0.29
C : ADMINISTRATION	34.00	31.00	-8.82	0.00	0.00	0.00	0.08	0.09	4.45	0.31
C : TEACHERS	2096.80	1885.00	-10.10	0.00	0.00	0.00	5.21	5.39	2.99	19.01

BOARD 7-R

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1970	1975	%DIFF	1970	1976	%DIFF	1970	1975	%DIFF	1976
NC : ADMINISTRATION	2.00	0.00	-100.00	1.37	0.00	-100.00	0.07	0.00	-100.00	0.00
NC : TECHNICAL	16.00	15.00	0.00	10.78	11.85	26.41	0.56	0.77	37.00	1.45
NC : CLERICAL&SECRET	4.00	7.50	87.50	2.74	6.49	137.01	0.14	0.35	156.88	0.68
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	5.00	1.00	-80.00	0.00	0.00	0.00	0.17	0.05	-72.60	0.09
C : TEACHERS	141.00	114.50	-18.79	0.00	0.00	0.00	4.9[illegible]	5.48	11.25	10.41

BOARD 7-S

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1970	1975	%DIFF	1970	1976	%DIFF	1970	1975	%DIFF	1976
NC : ADMINISTRATION	1.00	0.00	-100.00	0.81	0.00	-100.00	0.06	0.00	-100.00	0.00
NC : TECHNICAL	13.00	15.00	15.38	10.52	13.45	27.91	0.77	0.90	15.94	7.50
NC : CLERICAL&SECRET	10.00	9.50	-5.00	8.09	8.52	5.31	0.59	0.57	-4.55	4.75
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : ADMINISTRATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C : TEACHERS	123.60	111.50	-9.79	0.00	0.00	0.00	7.34	6.66	-9.36	55.75

BOARD 7-T

	FTE			NC:C*100			NC/C:P*100			NC/C:S
CATEGORIES	1970	1975	%DIFF	1970	1976	%DIFF	1970	1976	%DIFF	1976
NC : ADMINISTRATION	6.00	3.00	-50.00	2.22	1.32	-40.66	0.13	0.08	-39.63	0.23
NC : TECHNICAL	29.00	38.00	31.03	10.72	16.67	55.57	0.64	1.01	58.22	2.92
NC : CLERICAL&SECRET	21.00	22.00	4.76	7.76	9.65	24.34	0.46	0.58	26.50	1.69
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	15.00	15.00	0.00	5.54	6.58	18.88	0.33	0.40	20.75	1.15
C : ADMINISTRATION	6.00	2.00	-66.67	0.00	0.00	0.00	0.13	0.05	-59.75	0.15
C : TEACHERS	264.00	225.00	-14.77	0.00	0.00	0.00	5.82	6.00	3.11	17.38

BOARD 9

CATEGORIES	FTE			NC:C*100			NC/C:P*100			NC/C:S
	1969	1976	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
NC : ADMINISTRATION	3.00	2.00	-33.33	2.87	2.06	-28.18	0.15	0.12	-15.7[illegible]	0.22
NC : TECHNICAL	12.00	14.00	16.67	11.48	14.43	25.69	0.58	0.85	47.37	1.56
NC : CLERICAL&SECRET	1.70	9.00	429.41	1.63	9.28	470.35	0.08	0.55	568.71	1.00
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	8.00	8.00	0.00	7.66	8.25	7.73	0.39	0.49	26.32	0.89
C : ADMINISTRATION	1.50	3.00	100.00	0.00	0.00	0.00	0.07	0.18	152.63	0.33
C : TEACHERS	103.00	94.00	-8.74	0.00	0.00	0.00	4.99	5.75	15.28	10.44

BOARD 10

CATEGORIES	FTE			NC:C*100			NC/C:P*100			NC/C:S
	1971	1976	%DIFF	1971	1976	%DIFF	1971	1976	%DIFF	1976
NC : ADMINISTRATION	16.30	18.70	14.72	1.53	1.65	8.08	0.07	0.08	22.98	0.32
NC : TECHNICAL	160.70	184.30	14.69	15.06	16.27	8.05	0.67	0.83	22.94	3.18
NC : CLERICAL&SECRET	64.70	127.20	96.60	6.06	11.23	85.22	0.27	0.57	110.75	2.19
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	16.00	16.00	0.00	1.50	1.41	-5.79	0.07	0.07	7.20	0.28
C : ADMINISTRATION	11.40	16.00	40.35	0.00	0.00	0.00	0.05	0.07	50.46	0.28
C : TEACHERS	1056.00	1117.00	5.78	0.00	0.00	0.00	4.41	5.00	13.39	19.26

BOARD 11

CATEGORIES	FTE			NC:C*100			NC/C:P*100			NC/C:S
	1969	1976	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
NC : ADMINISTRATION	29.00	59.00	103.45	2.84	4.78	68.28	0.09	0.28	201.68	0.78
NC : TECHNICAL	147.10	214.00	45.48	14.42	17.35	20.33	0.48	1.03	115.72	2.82
NC : CLERICAL&SECRET	84.00	121.50	44.64	8.23	9.85	19.64	0.27	0.59	114.48	1.60
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	10.00	16.00	60.00	0.98	1.30	32.35	0.03	0.08	137.25	0.21
C : ADMINISTRATION	31.00	58.00	87.10	0.00	0.00	0.00	0.10	0.28	177.43	0.76
C : TEACHERS	989.30	1175.50	18.82	0.00	0.00	0.00	3.22	5.68	76.19	15.47

BOARD 12

CATEGORIES	FTE 1974	 1975	 %DIFF	NC:C*100 1974	 1976	 %DIFF	NC/C:P*100 1974	 1976	 %DIFF	NC/C:S 1976
NC : ADMINISTRATION	2.00	3.00	50.00	0.90	1.13	26.63	0.04	0.05	36.70	0.16
NC : TECHNICAL	33.10	37.50	13.29	14.83	14.18	-4.36	0.65	0.67	3.24	1.97
NC : CLERICAL&SECRET	18.00	20.00	11.11	8.06	7.56	-6.20	0.35	0.36	1.26	1.05
NC : TEMPORARYASSIST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC : TRUSTEES	14.00	14.00	0.00	6.27	5.30	-15.58	0.27	0.25	-8.87	0.74
C : ADMINISTRATION	6.00	6.50	8.33	0.00	0.00	0.00	0.12	0.12	-1.27	0.34
C : TEACHERS	217.20	257.90	18.74	0.00	0.00	0.00	4.24	4.59	8.21	13.57

TOTAL SAMPLE

CATEGORIES	FTE 1970	 1975	 %DIFF	NC:C*100 1970	 1976	 %DIFF	NC/C:P*100 1970	 1976	 %DIFF	NC/C:S 1976
NC : ADMINISTRATION	184.00	255.80	39.02	1.39	1.94	39.78	0.06	0.09	54.43	0.35
NC : TECHNICAL	2666.10	2692.90	1.01	20.11	20.42	1.56	0.84	0.94	12.20	3.69
NC : CLERICAL&SECRET	1212.30	1369.10	12.93	9.14	10.38	13.55	0.38	0.48	25.45	1.88
NC : TEMPORARYASSIST	28.00	42.50	51.79	0.21	0.32	52.62	0.01	0.01	68.61	0.06
NC : TRUSTEES	156.70	167.00	6.57	1.18	1.27	7.16	0.05	0.06	18.39	0.23
C : ADMINISTRATION	258.10	222.50	-13.79	0.00	0.00	0.00	0.08	0.08	-4.24	0.31
C : TEACHERS	13000.00	12963.40	-0.28	0.00	0.00	0.00	4.07	4.51	10.77	17.78

APPENDIX H

Staffing Ratios Across Functional Categories

BOARD 1-E

		FTE-NC			NC:C*100			NC:P*100		NC:S
CATEGORIES	1970	1976	%DIFF	1970	1976	%DIFF	1970	1976	%DIFF	1976
BUS ADM-MAN/SUP	8.10	15.00	85.19		0.48		0.01	0.02	121.19	0.10
-OTHER	100.80	69.50	-31.05		2.24		0.14	0.12	-17.65	0.47
-TOTAL	108.90	84.50	-22.41		2.73		0.15	0.14	-7.32	0.57
CSER-TOTAL	16.20	9.00	-44.44		0.29		0.02	0.01	-33.64	0.06
ED.SER-AUDIO VISUAL	38.00	38.00	0.00		1.23		0.05	0.06	19.44	0.26
-GUIDANCE&COUNSE	4.00	1.50	-62.50		0.05		0.01	0.00	-55.21	0.01
-LIBRARY	23.50	3.50	-85.11		0.11		0.03	0.01	-82.21	0.02
-PSYCHOLOGICAL	30.60	28.00	-8.50		0.90		0.04	0.05	9.29	0.19
-OTHER	2.10	4.50	114.29		0.15		0.00	0.01	155.95	0.03
-TOTAL	98.20	75.50	-23.12		2.44		0.13	0.13	-8.17	0.51
ATT,HLTH&FOOD SER-AT	5.50	6.50	18.18		0.21		0.01	0.01	41.16	0.04
-HEALTH	21.40	0.00	-100.00		0.00		0.03	0.00	-100.00	0.00
-FOOD SERVICES	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00
-TOTAL	26.90	6.50	-75.84		0.21		0.04	0.01	-71.14	0.04
PLOP-TOTAL	481.20	501.00	4.11		16.16		0.67	0.83	24.36	3.41
PLMT-TOTAL	144.80	99.50	-31.28		3.21		0.20	0.17	-17.93	0.68
TRANS-ADMIN	4.70	5.50	17.02		0.18		0.01	0.01	39.77	0.04
-HOME-SCHOOL	79.20	36.00	-54.55		1.16		0.11	0.06	-45.71	0.24
-OTHER	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00
-TOTAL	83.90	41.50	-50.54		1.34		0.12	0.07	-40.92	0.28
INSTR-BOARD OFFICE	51.00	42.00	-17.65		1.35		0.07	0.07	-1.64	0.29
-SCHOOLS	209.20	193.50	-7.50		6.24		0.29	0.32	10.48	1.32
-TOTAL	260.20	235.50	-9.49		7.60		0.36	0.39	8.10	1.60
GRANDTOTAL	1220.30	1053.00	-13.71		33.96		1.70	1.75	3.07	7.16

BOARD 1-5

CATEGORIES	FTE-NC 1970	1975	%DIFF	NCTC*100 1970	1976	%DIFF	NCTP*100 1970	1976	%DIFF	NCTS 1976
BUS ADM-MAN/SUP	4.90	15.00	206.12		0.69		0.02	0.04	174.70	0.29
-OTHER	61.20	71.00	16.01		3.25		0.19	0.20	4.11	1.39
-TOTAL	66.10	86.00	30.11		3.94		0.20	0.24	16.75	1.69
CSER-TOTAL	9.80	18.00	83.67		0.82		0.03	0.05	64.82	0.35
ED.SER-AUDIO VISUAL	34.60	56.50	63.29		2.59		0.11	0.16	46.53	1.11
-GUIDANCE&COUNSE	3.00	1.50	-50.00		0.07		0.01	0.00	-55.13	0.03
-LIBRARY	11.90	3.50	-70.59		0.16		0.04	0.01	-73.61	0.07
-PSYCHOLOGICAL	21.40	28.00	30.84		1.28		0.07	0.08	17.41	0.55
-OTHER	1.20	4.50	275.00		0.21		0.00	0.01	236.51	0.09
-TOTAL	72.10	94.00	30.37		4.31		0.22	0.26	16.99	1.84
ATT,HLTH&FOOD SER-AT	3.50	6.00	71.43		0.27		0.01	0.02	53.83	0.12
-HEALTH	26.40	0.00	-100.00		0.00		0.08	0.00	-100.00	0.00
-FOOD SERVICES	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00
-TOTAL	29.90	6.00	-79.93		0.27		0.09	0.02	-81.99	0.12
PLOP-TOTAL	393.90	414.00	5.10		18.96		1.21	1.14	-5.69	8.12
PLNT-TOTAL	95.00	99.50	4.74		4.56		0.29	0.27	-6.01	1.95
TRANS-ADMIN	2.30	1.50	-34.78		0.07		0.01	0.00	-41.48	0.03
-HOME-SCHOOL	30.80	8.00	-74.03		0.37		0.09	0.02	-76.69	0.16
-OTHER	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00
-TOTAL	33.10	9.50	-71.30		0.44		0.10	0.03	-74.25	0.19
INSTR-BOARD OFFICE	29.80	38.00	27.52		1.74		0.09	0.10	14.43	0.75
-SCHOOLS	187.80	152.00	-19.06		6.96		0.58	0.42	-27.37	2.98
-TOTAL	217.60	190.00	-12.68		8.70		0.67	0.52	-21.65	3.73
GRANDTOTAL	917.50	917.00	-0.05		42.01		2.82	2.53	-10.31	17.98

BOARD 1-1

CATEGORIES	FTE-NC 1970	1976	%DIFF	NCIC*100 1970	1976	%DIFF	NCIP*100 1970	1976	%DIFF	NCIS 1976
BUS ADM-MAN/SUP	13.00	30.00	130.77	0.23	0.57	145.09	0.01	0.03	149.88	0.15
-OTHER	162.00	140.50	-13.27	2.89	2.66	-7.89	0.16	0.15	-6.09	0.71
-TOTAL	175.00	170.50	-2.57	3.12	3.23	3.48	0.17	0.18	5.50	0.86
CSER-TOTAL	26.00	27.00	3.85	0.46	0.51	10.29	0.02	0.03	12.45	0.14
ED.SER-AUDIO VISUAL	72.60	94.50	30.17	1.29	1.79	38.24	0.07	0.10	40.95	0.48
-GUIDANCE&COUNSE	7.00	3.00	-57.14	0.12	0.06	-54.48	0.01	0.00	-53.59	0.02
-LIBRARY	35.40	7.00	-80.23	0.63	0.13	-79.00	0.03	0.01	-78.59	0.04
-PSYCHOLOGICAL	52.00	56.00	7.69	0.93	1.06	14.38	0.05	0.06	16.61	0.28
-OTHER	3.30	9.00	172.73	0.06	0.17	189.65	0.00	0.01	195.32	0.05
-TOTAL	170.30	169.50	-0.47	3.03	3.21	5.71	0.16	0.18	7.77	0.86
ATT,HLTH&FOOD SER-AT	9.00	12.50	38.89	0.16	0.24	47.51	0.01	0.01	50.39	0.06
-HEALTH	47.80	0.00	-100.00	0.85	0.00	-100.00	0.05	0.00	-100.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	56.80	12.50	-77.99	1.01	0.24	-76.63	0.05	0.01	-76.17	0.06
PLOP-TOTAL	875.10	915.00	4.56	15.60	17.32	11.05	0.84	0.95	13.22	4.62
PLMT-TOTAL	239.80	199.00	-17.01	4.27	3.77	-11.86	0.23	0.21	-10.14	1.01
TRANS-ADMIN	7.00	7.00	0.00	0.12	0.13	6.21	0.01	0.01	8.28	0.04
-HOME-SCHOOL	110.00	44.00	-60.00	1.96	0.83	-57.52	0.11	0.05	-56.69	0.22
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	117.00	51.00	-56.41	2.09	0.97	-53.71	0.11	0.05	-52.80	0.26
INSTR-BOARD OFFICE	80.80	80.00	-0.99	1.44	1.51	5.15	0.08	0.08	7.21	0.40
-SCHOOLS	397.00	345.50	-12.97	7.07	6.54	-7.57	0.38	0.36	-5.76	1.74
-TOTAL	477.80	425.50	-10.95	8.51	8.05	-5.42	0.46	0.44	-3.57	2.15
GRANDTOTAL	2137.80	1970.00	-7.85	38.10	37.29	-2.13	2.05	2.04	-0.22	9.95

BOARD 2-E

CATEGORIES	FTE-AC			NC:C*100			NC:P*100			NC:S
	1969	1976	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
BUS ADM-MAN/SUP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	0.00	10.00	0.00	0.00	1.59	0.00	0.00	0.08	0.00	0.22
-GUIDANCE&COUNSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-LIBRARY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-PSYCHOLOGICAL	0.00	2.50	0.00	0.00	0.41	0.00	0.00	0.02	0.00	0.06
-OTHER	0.00	19.00	0.00	0.00	3.16	0.00	0.00	0.15	0.00	0.43
-TOTAL	0.00	32.50	0.00	0.00	5.16	0.00	0.00	0.24	0.00	0.71
ATT,HLTH&FOOD SER-AT	0.50	0.50	0.00	0.09	0.08	-11.97	0.00	0.00	19.10	0.01
-HEALTH	1.60	0.00	-100.00	0.30	0.00	-100.00	0.01	0.00	-100.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	2.10	0.50	-76.19	0.39	0.08	-79.52	0.01	0.00	-71.64	0.01
PLOP-TOTAL	72.00	80.50	11.81	13.28	12.78	-3.81	0.45	0.61	35.16	1.75
PLNT-TOTAL	3.00	9.00	200.00	0.55	1.43	158.10	0.02	0.07	257.31	0.20
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	0.10	2.20	2100.00	0.02	0.35	1792.70	0.00	0.02	2520.24	0.05
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.10	2.20	2100.00	0.02	0.35	1792.70	0.00	0.02	2520.24	0.05
INSTR-BOARD OFFICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-SCHOOLS	19.00	33.00	73.68	3.51	5.24	49.42	0.12	0.25	106.86	0.72
-TOTAL	19.00	33.00	73.68	3.51	5.24	49.42	0.12	0.25	106.86	0.72
GRANDTOTAL	96.20	157.70	63.93	17.75	25.03	41.03	0.61	1.19	95.24	3.41

BOARD 2-S

	FTE-NC			NC:C*100			NC:P*100			NC:S
CATEGORIES	1969	1975	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
BUS ADM-MAN/SUP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-GUIDANCE&COUNSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-LIBRARY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-PSYCHOLOGICAL	0.00	1.00	0.00	0.00	0.17	0.00	0.00	0.01	0.00	0.11
-OTHER	0.00	5.00	0.00	0.00	0.98	0.00	0.00	0.06	0.00	0.64
-TOTAL	0.00	6.00	0.00	0.00	1.15	0.00	0.00	0.07	0.00	0.75
ATT,HLTH&FOOD SER-AT	0.10	0.50	400.00	0.02	0.10	356.73	0.00	0.01	141.62	0.06
-HEALTH	1.40	0.00	-100.00	0.29	0.00	-100.00	0.02	0.00	-100.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	1.50	0.50	-66.67	0.32	0.10	-69.55	0.02	0.01	-70.56	0.06
PLOP-TOTAL	87.00	96.00	10.34	18.32	18.46	0.80	1.07	1.04	-2.51	12.00
PLNT-TOTAL	3.00	8.00	166.67	0.63	1.54	143.59	0.04	0.09	135.51	1.00
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTR-BOARD OFFICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-SCHOOLS	43.00	46.00	6.98	9.05	8.85	-2.28	0.53	0.50	-5.51	5.75
-TOTAL	43.00	46.00	6.98	9.05	8.85	-2.28	0.53	0.50	-5.51	5.75
GRANDTOTAL	134.50	156.50	16.36	28.32	30.10	6.29	1.66	1.70	2.77	19.56

BOARD 2-T

		FTE-#C			%C:C*100			%C:P*100		%C:S
CATEGORIES	1969	1975	%DIFF	1969	1976	%DIFF	1969	1975	%DIFF	1976
BUS ADM-MAN/SUP	6.00	5.00	-16.67	0.58	0.43	-25.89	0.03	0.02	-11.24	0.09
-OTHER	10.00	20.50	105.00	0.97	1.77	82.32	0.04	0.09	118.35	0.38
-TOTAL	16.00	25.50	59.38	1.55	2.20	41.74	0.07	0.11	69.76	0.47
CSER-TOTAL	0.00	2.00	0.00	0.00	0.17	0.00	0.00	0.01	0.00	0.04
ED.SER-AUDIO VISUAL	0.00	10.00	0.00	0.00	0.86	0.00	0.00	0.04	0.00	0.19
-GUIDANCE&COUNSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-LIBRARY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-PSYCHOLOGICAL	0.00	3.50	0.00	0.00	0.30	0.00	0.00	0.02	0.00	0.06
-OTHER	0.00	25.00	0.00	0.00	2.16	0.00	0.00	0.11	0.00	0.46
-TOTAL	0.00	38.50	0.00	0.00	3.33	0.00	0.00	0.17	0.00	0.71
ATT,HLTH&FOOD SER-AT	0.60	1.00	66.67	0.06	0.09	48.23	0.00	0.00	77.52	0.02
-HEALTH	3.00	0.00	-100.00	0.29	0.00	-100.00	0.01	0.00	-100.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	3.60	1.00	-72.22	0.35	0.09	-75.30	0.02	0.00	-70.41	0.02
PLOP-TOTAL	160.50	180.50	12.46	15.60	15.60	0.02	0.67	0.80	19.79	3.34
PLMT-TOTAL	10.00	21.00	110.00	0.97	1.82	86.77	0.04	0.09	123.68	0.39
TRANS-ADMIN	1.50	2.50	66.67	0.15	0.22	48.23	0.01	0.01	77.52	0.05
-HOME-SCHOOL	0.10	2.20	2100.00	0.01	0.19	1856.61	0.00	0.01	2243.31	0.04
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	1.60	4.70	193.75	0.16	0.41	161.25	0.01	0.02	212.48	0.09
INSTR-BOARD OFFICE	9.00	7.00	-22.22	0.87	0.61	-30.83	0.04	0.03	-17.16	0.13
-SCHOOLS	62.00	79.00	27.42	6.03	6.83	13.32	0.26	0.35	35.72	1.46
-TOTAL	71.00	86.00	21.13	6.90	7.43	7.73	0.30	0.38	29.02	1.59
GRANDTOTAL	262.70	359.20	36.73	25.53	31.05	21.61	1.10	1.60	45.61	6.65

BOARD J-E

	FTE-NO			NO:C*100			NO:P*100			NO:S
CATEGORIES	1969	1975	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
BUS ADM-MAN/SUP	4.50	5.50	22.22	0.98	1.20	22.76	0.04	0.06	47.40	0.14
-OTHER	4.50	7.50	66.67	0.98	1.64	67.40	0.04	0.08	101.00	0.20
-TOTAL	9.00	13.00	44.44	1.96	2.84	45.08	0.08	0.14	74.20	0.34
CSER-TOTAL	1.50	1.50	0.00	0.33	0.33	0.44	0.01	0.02	20.60	0.04
ED.SER-AUDIO VISUAL	1.50	3.00	100.00	0.33	0.66	100.88	0.01	0.03	141.20	0.08
-GUIDANCE&COUNSE	1.00	2.00	100.00	0.22	0.44	100.88	0.01	0.02	141.20	0.05
-LIBRARY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-PSYCHOLOGICAL	1.50	4.00	166.67	0.33	0.88	167.83	0.01	0.04	221.60	0.11
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	4.00	9.00	125.00	0.87	1.97	125.98	0.04	0.10	171.35	0.24
ATT,HLTH&FOOD SER-AT	1.00	1.00	0.00	0.22	0.22	0.44	0.01	0.01	20.60	0.03
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	1.00	1.00	0.00	0.22	0.22	0.44	0.01	0.01	20.60	0.03
PLOP-TOTAL	80.50	88.00	9.32	17.54	19.26	9.80	0.73	0.97	31.84	2.32
PLMT-TOTAL	5.00	8.00	60.00	1.09	1.75	60.70	0.05	0.09	92.96	0.21
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTR-BOARD OFFICE	2.00	3.50	75.00	0.44	0.77	75.77	0.02	0.04	111.05	0.09
-SCHOOLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	17.00	28.00	64.71	3.70	6.13	65.43	0.15	0.31	98.61	0.74
GRANDTOTAL	118.00	148.50	25.85	25.71	32.49	26.40	1.07	1.63	51.77	3.91

BOARD 9-S

CATEGORIES	FTE-NC 1969	1975	%DIFF	NC:C*100 1969	1976	%DIFF	NC:P*100 1969	1976	%DIFF	NC:S 1976
BUS ADM-MAN/SUP	4.00	5.00	25.00	1.04	1.21	12.14	0.06	0.07	10.46	0.71
-OTHER	4.50	7.50	66.67	1.21	1.82	49.52	0.07	0.11	47.82	1.07
-TOTAL	8.50	12.50	47.06	2.29	3.03	31.93	0.14	0.18	30.43	1.79
CSER-TOTAL	3.50	5.50	57.14	0.94	1.33	40.97	0.06	0.08	39.37	0.79
ED.SER-AUDIO VISUAL	1.00	3.00	200.00	0.27	0.73	169.13	0.02	0.04	166.07	0.43
-GUIDANCE&COUNSE	1.00	1.00	0.00	0.27	0.24	-10.29	0.02	0.01	-11.31	0.14
-LIBRARY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-PSYCHOLOGICAL	2.50	2.00	-20.00	0.67	0.48	-28.23	0.04	0.03	-29.05	0.29
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	4.50	6.00	33.33	1.21	1.45	19.61	0.07	0.09	18.25	0.86
ATT,HLTH&FOOD SER-AT	0.50	1.00	100.00	0.13	0.24	79.42	0.01	0.01	77.38	0.14
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	6.00	10.00	66.67	1.62	2.42	49.52	0.10	0.14	47.82	1.43
-TOTAL	6.50	11.00	69.23	1.75	2.66	51.82	0.11	0.16	50.09	1.57
PLOP-TOTAL	71.50	108.10	51.19	19.30	26.17	35.63	1.16	1.55	34.09	15.44
PLMT-TOTAL	3.00	4.00	33.33	0.81	0.97	19.61	0.05	0.06	18.25	0.57
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTR-BOARD OFFICE	2.00	3.50	75.00	0.54	0.85	56.99	0.03	0.05	55.21	0.50
-SCHOOLS	31.00	35.00	12.90	8.37	8.47	1.28	0.50	0.50	0.14	5.00
-TOTAL	33.50	39.50	17.91	9.04	9.56	5.78	0.54	0.57	4.58	5.64
GRANDTOTAL	131.00	185.50	42.44	35.36	45.18	27.78	2.12	2.68	26.33	26.66

BOARD 3-T

	PTE-NC			NC:C*100			NC:P*100			NC:S
CATEGORIES	1969	1976	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
BUS ADM-MAN/SUP	8.50	10.50	23.53	1.02	1.20	17.51	0.05	0.07	31.90	0.23
-OTHER	9.00	15.00	66.67	1.08	1.72	58.54	0.05	0.09	77.96	0.33
-TOTAL	17.50	25.50	45.71	2.11	2.92	38.61	0.10	0.16	55.59	0.57
CSER-TOTAL	5.00	7.00	40.00	0.60	0.80	33.18	0.03	0.04	49.49	0.16
ED.SER-AUDIO VISUAL	2.50	6.00	140.00	0.30	0.69	128.30	0.01	0.04	156.26	0.13
-GUIDANCE&COUNSE	2.00	3.00	50.00	0.24	0.34	42.69	0.01	0.02	60.17	0.07
-LIBRARY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-PSYCHOLOGICAL	4.00	6.00	50.00	0.48	0.69	42.69	0.02	0.04	60.17	0.13
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	8.50	15.00	76.47	1.02	1.72	67.87	0.05	0.09	88.43	0.33
ATT,HLTH&FOOD SER-AT	1.50	2.00	33.33	0.18	0.23	26.83	0.01	0.01	42.37	0.04
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	6.00	10.00	66.67	0.72	1.15	58.54	0.03	0.06	77.96	0.22
-TOTAL	7.50	12.00	60.00	0.90	1.38	52.20	0.04	0.07	70.84	0.27
PLOP-TOTAL	152.00	196.10	29.01	18.32	22.49	22.73	0.89	1.22	37.76	4.36
PLMT-TOTAL	8.00	12.00	50.00	0.96	1.38	42.69	0.05	0.07	60.17	0.27
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTR-BOARD OFFICE	4.00	7.00	75.00	0.48	0.80	66.47	0.02	0.04	86.86	0.16
-SCHOOLS	31.00	35.00	12.90	3.74	4.01	7.40	0.18	0.22	20.55	0.78
-TOTAL	50.50	67.50	33.66	6.09	7.74	27.15	0.29	0.42	42.72	1.50
GRANDTOTAL	249.00	335.10	34.58	30.02	38.43	28.02	1.45	2.08	43.70	7.45

BOARD 5-E

	FTE-NC			NC:C*100			NC:P*100			NC:S
CATEGORIES	1971	1976	%DIFF	1971	1976	%DIFF	1971	1976	%DIFF	1976
BUS ADM-MAN/SUP	3.00	2.50	-16.67	0.55	0.42	-23.94	0.02	0.02	-9.04	0.06
-OTHER	9.00	9.50	5.56	1.65	1.59	-3.66	0.07	0.08	15.21	0.24
-TOTAL	12.00	12.00	0.00	2.19	2.00	-8.73	0.09	0.10	9.15	0.30
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	3.20	4.00	25.00	0.59	0.67	14.09	0.02	0.03	36.44	0.10
-GUIDANCE&COUNSE	6.40	8.40	31.25	1.17	1.40	19.79	0.05	0.07	43.26	0.21
-LIBRARY	3.50	1.80	-48.57	0.64	0.30	-53.06	0.03	0.01	-43.87	0.04
-PSYCHOLOGICAL	2.40	2.40	0.00	0.44	0.40	-8.73	0.02	0.02	9.15	0.06
-OTHER	0.00	3.50	0.00	0.00	0.58	0.00	0.00	0.03	0.00	0.09
-TOTAL	15.50	20.10	29.68	2.83	3.36	18.36	0.12	0.17	41.54	0.50
ATT,HLTH&FOOD SER-AT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLOP-TOTAL	75.80	67.10	-11.48	13.86	11.20	-19.21	0.57	0.55	-3.38	1.68
PLMT-TOTAL	8.90	14.70	65.17	1.63	2.45	50.75	0.07	0.12	80.28	0.37
TRANS-ADMIN	0.70	0.70	0.00	0.13	0.12	-8.73	0.01	0.01	9.15	0.02
-HOME-SCHOOL	0.50	0.00	-100.00	0.09	0.00	-100.00	0.00	0.00	-100.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	1.20	0.70	-41.67	0.22	0.12	-46.76	0.01	0.01	-36.33	0.02
INSTR-BOARD OFFICE	2.50	2.60	4.00	0.46	0.43	-5.08	0.02	0.02	13.52	0.06
-SCHOOLS	14.50	35.20	142.76	2.65	5.88	121.57	0.11	0.29	164.97	0.88
-TOTAL	17.00	37.80	122.35	3.11	6.31	102.94	0.13	0.31	142.70	0.94
GRANDTOTAL	130.40	152.40	16.87	23.85	25.44	6.67	0.99	1.26	27.56	3.81

BOARD 5-S

	FTE-NC			NC:C*100			NC:P*100			NC:S
CATEGORIES	1971	1975	%DIFF	1971	1976	%DIFF	1971	1975	%DIFF	1976
BUS ADM-MAN/SUP	3.00	2.50	-16.67	0.71	0.62	-12.18	0.04	0.04	-14.85	0.42
-OTHER	7.00	8.00	14.29	1.65	1.99	20.44	0.10	0.12	16.78	1.33
-TOTAL	10.00	10.50	5.00	2.36	2.61	10.66	0.15	0.16	7.29	1.75
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	0.80	1.00	25.00	0.19	0.25	31.74	0.01	0.01	27.72	0.17
-GUIDANCE&COUNSE	0.60	0.20	-66.67	0.14	0.05	-64.87	0.01	0.00	-65.94	0.03
-LIBRARY	0.00	4.30	0.00	0.00	1.19	0.00	0.00	0.07	0.00	0.80
-PSYCHOLOGICAL	0.60	0.50	0.00	0.14	0.15	5.39	0.01	0.01	2.18	0.10
-OTHER	0.00	0.40	0.00	0.00	0.10	0.00	0.00	0.01	0.00	0.07
-TOTAL	2.00	7.00	250.00	0.47	1.74	268.86	0.03	0.10	257.63	1.17
ATT,HLTH&FOOD SER-AT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	1.50	2.20	46.67	0.35	0.55	54.57	0.02	0.03	49.86	0.37
-TOTAL	1.50	2.20	46.67	0.35	0.55	54.57	0.02	0.03	49.86	0.37
PLOP-TOTAL	54.70	46.30	-15.36	12.89	11.50	-10.80	0.79	0.69	-13.51	7.72
PLMT-TOTAL	12.90	5.30	-51.16	3.04	1.56	-48.53	0.19	0.09	-50.10	1.05
TRANS-ADMIN	0.70	0.70	0.00	0.16	0.17	5.39	0.01	0.01	2.18	0.12
-HOME-SCHOOL	11.50	0.00	-100.00	2.71	0.00	-100.00	0.17	0.00	-100.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	12.20	0.70	-94.26	2.87	0.17	-93.95	0.18	0.01	-94.14	0.12
INSTR-BOARD OFFICE	2.50	2.40	-4.00	0.59	0.60	1.17	0.04	0.04	-1.91	0.40
-SCHOOLS	32.50	31.50	-3.08	7.66	7.82	2.15	0.47	0.47	-0.96	5.25
-TOTAL	35.00	33.90	-3.14	8.25	8.42	2.08	0.51	0.50	-1.03	5.65
GRANDTOTAL	128.30	105.70	-15.68	30.23	26.55	-12.19	1.86	1.59	-14.86	17.82

BOARD 5-T

CATEGORIES	FTE-NC			NC:C*100			NC:P*100			NC:S
	1971	1976	%DIFF	1971	1976	%DIFF	1971	1976	%DIFF	1976
BUS ADM-MAN/SUP	6.00	5.00	-16.67	0.62	0.50	-19.17	0.03	0.03	-11.12	0.11
-OTHER	16.00	17.50	9.38	1.65	1.75	6.09	0.08	0.09	16.65	0.38
-TOTAL	22.00	22.50	2.27	2.26	2.25	-0.80	0.11	0.12	9.08	0.49
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	4.00	5.00	25.00	0.41	0.50	21.24	0.02	0.03	33.32	0.11
-GUIDANCE&COUNSE	7.00	8.60	22.86	0.72	0.86	19.16	0.03	0.05	31.03	0.19
-LIBRARY	3.50	6.60	88.57	0.36	0.66	82.90	0.02	0.04	101.12	0.14
-PSYCHOLOGICAL	3.00	3.00	0.00	0.31	0.30	-3.01	0.01	0.02	6.65	0.07
-OTHER	0.00	3.90	0.00	0.00	0.39	0.00	0.00	0.02	0.00	0.08
-TOTAL	17.50	27.10	54.86	1.80	2.71	50.20	0.09	0.14	65.16	0.59
ATT,HLTH&FOOD SER-AT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	1.50	2.20	46.67	0.15	0.22	42.26	0.01	0.01	56.43	0.05
-TOTAL	1.50	2.20	46.67	0.15	0.22	42.26	0.01	0.01	56.43	0.05
PLOP-TOTAL	130.50	113.40	-13.10	13.43	11.32	-15.72	0.65	0.60	-7.32	2.47
PLNT-TOTAL	21.80	21.00	-3.67	2.24	2.10	-6.56	0.11	0.11	2.74	0.46
TRANS-ADMIN	1.40	1.40	0.00	0.14	0.14	-3.01	0.01	0.01	6.65	0.03
-HOME-SCHOOL	12.00	0.00	-100.00	1.24	0.00	-100.00	0.06	0.00	-100.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	13.40	1.40	-89.55	1.38	0.14	-89.87	0.07	0.01	-88.86	0.03
INSTR-BOARD OFFICE	5.00	5.00	0.00	0.51	0.50	-3.01	0.02	0.03	6.65	0.11
-SCHOOLS	47.00	66.70	41.91	4.84	6.66	37.65	0.23	0.35	51.36	1.45
-TOTAL	52.00	71.70	37.88	5.35	7.16	33.74	0.26	0.38	47.06	1.56
GRANDTOTAL	258.70	259.30	0.23	26.63	25.89	-2.78	1.29	1.38	6.90	5.64

BOARD 5-E

	FTE-NC			NC:C*100			NC:P*100			NC:S
CATEGORIES	1969	1976	%DIFF	1969	1976	%DIFF	1969	1976	%DIFF	1976
BUS ADM-MAN/SUP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-GUIDANCE&COUNSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-LIBRARY	1.00	0.00	-100.00	0.09	0.00	-100.00	0.00	0.00	-100.00	0.00
-PSYCHOLOGICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	1.00	0.00	-100.00	0.09	0.00	-100.00	0.00	0.00	-100.00	0.00
ATT,HLTH&FOOD SER-AT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLOP-TOTAL	146.70	146.00	-0.48	13.01	14.44	11.03	0.58	0.71	23.00	1.76
PLMT-TOTAL	2.00	0.00	-100.00	0.18	0.00	-100.00	0.01	0.00	-100.00	0.00
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	8.20	3.00	-63.41	0.73	0.30	-59.18	0.03	0.01	-54.78	0.04
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	8.20	3.00	-63.41	0.73	0.30	-59.18	0.03	0.01	-54.78	0.04
INSTR-BOARD OFFICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-SCHOOLS	30.60	55.00	79.74	2.71	5.44	100.52	0.12	0.27	122.14	0.66
-TOTAL	30.60	55.00	79.74	2.71	5.44	100.52	0.12	0.27	122.14	0.66
GRANDTOTAL	188.50	204.00	8.22	16.71	20.18	20.74	0.74	0.99	33.76	2.46

BOARD 5-5

CATEGORIES	FTE-NC 1967	1975	%DIFF	NC:C*100 1967	1976	%DIFF	NC:P*100 1967	1975	%DIFF	NC:S 1976
BUS ADM-MAN/SUP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-GUIDANCE&COUNSE	0.00	16.00	0.00	0.00	1.83	0.00	0.00	0.11	0.00	1.00
-LIBRARY	10.00	10.00	0.00	1.03	1.14	10.86	0.07	0.07	1.59	0.63
-PSYCHOLOGICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	10.00	26.00	160.00	1.03	2.97	188.23	0.07	0.18	164.15	1.63
ATT,HLTH&FOOD SER-AT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	18.00	0.00	-100.00	1.86	0.00	-100.00	0.12	0.00	-100.00	0.00
-TOTAL	18.00	0.00	-100.00	1.86	0.00	-100.00	0.12	0.00	-100.00	0.00
PUOP-TOTAL	149.60	134.50	-10.09	15.44	15.39	-0.33	1.03	0.94	-8.66	8.41
PLNT-TOTAL	2.00	0.00	-100.00	0.21	0.00	-100.00	0.01	0.00	-100.00	0.00
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	15.30	3.00	-80.39	1.58	0.34	-78.26	0.10	0.02	-80.08	0.19
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	15.30	3.00	-80.39	1.58	0.34	-78.26	0.10	0.02	-80.08	0.19
INSTR-BOARD OFFICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-SCHOOLS	54.70	63.00	15.17	5.65	7.21	27.68	0.37	0.44	17.01	3.94
-TOTAL	54.70	63.00	15.17	5.65	7.21	27.68	0.37	0.44	17.01	3.94
GRANDTOTAL	249.60	226.50	-9.25	25.76	25.92	0.60	1.71	1.58	-7.81	14.16

BOARD 5-T

	FTE-NO			NO:C*100			NO:P*100			NO:S
CATEGORIES	1969	1975	%DIFF	1969	1976	%DIFF	1969	1975	%DIFF	1976
BUS ADM-MAN/SUP	14.00	13.00	-7.14	0.66	0.68	3.27	0.03	0.03	6.37	0.13
-OTHER	32.00	25.00	-21.88	1.50	1.30	-13.12	0.08	0.07	-10.51	0.25
-TOTAL	46.00	38.00	-17.39	2.16	1.98	-8.13	0.11	0.11	-5.37	0.38
CSER-TOTAL	0.00	3.00	0.00	0.00	0.16	0.00	0.00	0.01	0.00	0.03
ED.SER-AUDIO VISUAL	8.00	10.00	25.00	0.38	0.52	39.01	0.02	0.03	43.20	0.10
-GUIDANCE&COUNSE	5.00	16.00	220.00	0.23	0.84	255.87	0.01	0.05	266.58	0.16
-LIBRARY	13.00	12.00	-7.69	0.61	0.63	2.66	0.03	0.03	5.75	0.12
-PSYCHOLOGICAL	3.00	7.00	133.33	0.14	0.37	159.49	0.01	0.02	167.30	0.07
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	29.00	45.00	55.17	1.36	2.35	72.57	0.07	0.13	77.76	0.45
ATT,HLTH&FOOD SER-AT	2.50	2.50	0.00	0.12	0.13	11.21	0.01	0.01	14.56	0.03
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	18.00	0.00	-100.00	0.84	0.00	-100.00	0.04	0.00	-100.00	0.00
-TOTAL	20.50	2.50	-87.80	0.96	0.13	-86.44	0.05	0.01	-86.03	0.03
PLOP-TOTAL	301.80	284.50	-5.73	14.16	14.85	4.84	0.75	0.81	7.99	2.87
PLNT-TOTAL	37.50	46.00	22.67	1.76	2.40	36.42	0.09	0.13	40.52	0.46
TRANS-ADMIN	1.00	2.50	150.00	0.05	0.13	178.03	0.00	0.01	186.39	0.03
-HOME-SCHOOL	23.50	6.00	-74.47	1.10	0.31	-71.61	0.06	0.02	-70.75	0.06
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	24.50	8.50	-65.31	1.15	0.44	-61.42	0.06	0.02	-60.26	0.09
INSTR-BOARD OFFICE	9.00	16.00	77.78	0.42	0.84	97.71	0.02	0.05	103.66	0.16
-SCHOOLS	85.30	118.00	38.34	4.00	6.16	53.84	0.21	0.34	58.47	1.19
-TOTAL	95.30	136.00	42.71	4.47	7.10	58.71	0.24	0.39	63.48	1.37
GRANDTOTAL	554.60	563.50	1.60	26.03	29.41	13.00	1.38	1.61	16.40	5.69

BOARD 7-E

	FTE-NC			NC:C*100			NC:P*100			NC:S
CATEGORIES	1970	1976	%DIFF	1970	1976	%DIFF	1970	1976	%DIFF	1976
BUS ADM-MAN/SUP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	1.00	1.00	0.00	0.68	0.87	26.41	0.03	0.05	37.00	0.09
-GUIDANCE&COUNSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-LIBRARY	0.00	3.00	0.00	0.00	2.60	0.00	0.00	0.14	0.00	0.27
-PSYCHOLOGICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	1.00	4.00	300.00	0.68	3.46	405.63	0.03	0.19	448.01	0.36
ATT,HLTH&FOOD SER-AT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLOP-TOTAL	14.00	15.00	7.14	9.59	12.99	35.44	0.49	0.72	46.79	1.36
PLMT-TOTAL	3.00	0.00	-100.00	2.05	0.00	-100.00	0.10	0.00	-100.00	0.00
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTR-BOARD OFFICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-SCHOOLS	4.00	4.50	12.50	2.74	3.90	42.21	0.14	0.22	54.13	0.41
-TOTAL	4.00	4.50	12.50	2.74	3.90	42.21	0.14	0.22	54.13	0.41
GRANDTOTAL	22.00	23.50	6.82	15.07	20.35	35.03	0.77	1.12	46.14	2.14

BOARD 7-S

CATEGORIES	FTE-NC 1970	FTE-NC 1975	FTE-NC %DIFF	NC:C*100 1970	NC:C*100 1976	NC:C*100 %DIFF	NC:P*100 1970	NC:P*100 1976	NC:P*100 %DIFF	NC:S 1976
BUS ADM-MAN/SUP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	0.00	1.00	0.00	0.00	0.90	0.00	0.00	0.06	0.00	0.50
-GUIDANCE&COUNSE	0.00	1.00	0.00	0.00	0.90	0.00	0.00	0.06	0.00	0.50
-LIBRARY	2.00	2.00	0.00	1.62	1.79	10.85	0.12	0.12	0.48	1.00
-PSYCHOLOGICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	2.00	4.00	100.00	1.62	3.59	121.70	0.12	0.24	100.96	2.00
ATT,HLTH&FOOD SER-AT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLOP-TOTAL	12.00	14.00	16.67	9.71	12.56	29.33	0.71	0.84	17.22	7.00
PLMT-TOTAL	2.00	0.00	-100.00	1.62	0.00	-100.00	0.12	0.00	-100.00	0.00
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTR-BOARD OFFICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-SCHOOLS	8.00	6.50	-18.75	6.47	5.83	-9.93	0.48	0.39	-18.36	3.25
-TOTAL	8.00	6.50	-18.75	6.47	5.83	-9.93	0.48	0.39	-18.36	3.25
GRANDTOTAL	24.00	24.50	2.08	19.42	21.97	13.16	1.43	1.46	2.57	12.25

BOARD 7-I

CATEGORIES	FTE-AC 1970	FTE-AC 1976	FTE-AC %DIFF	NC:C*100 1970	NC:C*100 1976	NC:C*100 %DIFF	NC:P*100 1970	NC:P*100 1976	NC:P*100 %DIFF	NC:S 1976
BUS ADM-MAN/SUP	2.00	2.00	0.00	0.74	0.88	18.66	0.04	0.05	20.75	0.15
-OTHER	7.00	5.00	-28.57	2.59	2.19	-15.23	0.15	0.13	-13.75	0.38
-TOTAL	9.00	7.00	-22.22	3.33	3.07	-7.69	0.20	0.19	-6.08	0.54
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	1.00	2.00	100.00	0.37	0.88	137.37	0.02	0.05	141.50	0.15
-GUIDANCE&COUNSE	0.00	1.00	0.00	0.00	0.44	0.00	0.00	0.03	0.00	0.08
-LIBRARY	2.00	5.00	150.00	0.74	2.19	196.71	0.04	0.13	201.87	0.38
-PSYCHOLOGICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	3.00	8.00	166.67	1.11	3.51	216.49	0.07	0.21	222.00	0.62
ATT,HLTH&FOOD SER-AT	1.00	0.00	-100.00	0.37	0.00	-100.00	0.02	0.00	-100.00	0.00
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	1.00	0.00	-100.00	0.37	0.00	-100.00	0.02	0.00	-100.00	0.00
PLOP-TOTAL	26.00	29.00	11.54	9.61	12.72	32.38	0.57	0.77	34.68	2.23
PLMT-TOTAL	5.00	8.00	60.00	1.85	3.51	89.89	0.11	0.21	93.20	0.62
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTR-BOARD OFFICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-SCHOOLS	12.00	11.00	-8.33	4.43	4.82	8.79	0.26	0.29	10.69	0.85
-TOTAL	12.00	11.00	-8.33	4.43	4.82	8.79	0.26	0.29	10.69	0.85
GRANDTOTAL	56.00	63.00	12.50	20.69	27.63	33.52	1.23	1.67	35.84	4.85

BOARD 7

CATEGORIES	FTE-NO			NO:C*100			NO:P*100			NO:S
	1969	1975	%DIFF	1969	1976	%DIFF	1969	1975	%DIFF	1976
BUS ADM-MAN/SUP	3.00	2.00	-33.33	2.87	2.06	-28.18	0.15	0.12	-15.79	0.22
-OTHER	1.50	2.00	33.33	1.44	2.06	43.64	0.07	0.12	68.12	0.22
-TOTAL	4.50	4.00	-11.11	4.31	4.12	-4.24	0.22	0.24	12.28	0.44
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-GUIDANCE&COUNSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-LIBRARY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-PSYCHOLOGICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ATT,HLTH&FOOD SER-AT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLOP-TOTAL	11.00	12.00	9.09	10.53	12.37	17.53	0.53	0.73	37.80	1.33
PLMT-TOTAL	1.00	2.00	100.00	0.96	2.06	115.46	0.05	0.12	152.63	0.22
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTR-BOARD OFFICE	0.20	2.00	900.00	0.19	2.06	977.32	0.01	0.12	1163.16	0.22
-SCHOOLS	0.00	5.00	0.00	0.00	5.15	0.00	0.00	0.31	0.00	0.56
-TOTAL	0.20	7.00	3400.00	0.19	7.22	3670.62	0.01	0.43	4321.05	0.78
GRANDTOTAL	16.70	25.00	49.70	15.98	25.77	61.28	0.81	1.53	89.10	2.78

BOARD 10

	FTE-NC			NC:C*100			NC:P*100			NC:S
CATEGORIES	1971	1976	%DIFF	1971	1976	%DIFF	1971	1976	%DIFF	1976
BUS ADM-MAN/SUP	8.50	8.70	2.35	0.80	0.77	-3.57	0.04	0.04	9.72	0.15
-OTHER	17.60	28.00	59.09	1.65	2.47	49.88	0.07	0.13	70.55	0.48
-TOTAL	26.10	36.70	40.61	2.45	3.24	32.47	0.11	0.16	50.74	0.63
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	1.50	2.00	33.33	0.14	0.18	25.61	0.01	0.01	42.93	0.03
-GUIDANCE&COUNSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-LIBRARY	1.40	2.00	42.86	0.13	0.18	34.59	0.01	0.01	53.14	0.03
-PSYCHOLOGICAL	1.80	4.00	122.22	0.17	0.35	109.36	0.01	0.02	138.22	0.07
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	4.70	8.00	70.21	0.44	0.71	60.36	0.02	0.04	82.47	0.14
ATT,HLTH&FOOD SER-AT	3.00	3.00	0.00	0.28	0.26	-5.79	0.01	0.01	7.20	0.05
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	3.00	3.00	0.00	0.28	0.26	-5.79	0.01	0.01	7.20	0.05
PLOP-TOTAL	142.00	163.00	14.79	13.30	14.39	8.14	0.59	0.73	23.05	2.81
PLMT-TOTAL	17.80	19.30	8.43	1.67	1.70	2.15	0.07	0.09	16.23	0.33
TRANS-ADMIN	2.00	2.00	0.00	0.19	0.18	-5.79	0.01	0.01	7.20	0.03
-HOME-SCHOOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	2.00	2.00	0.00	0.19	0.18	-5.79	0.01	0.01	7.20	0.03
INSTR-BOARD OFFICE	15.10	22.20	47.02	1.41	1.96	38.51	0.06	0.10	57.61	0.38
-SCHOOLS	31.00	76.00	145.16	2.90	6.71	130.97	0.13	0.34	162.81	1.31
-TOTAL	46.10	98.20	113.02	4.32	8.67	100.68	0.19	0.44	128.35	1.69
GRANDTOTAL	241.70	330.20	36.62	22.64	29.14	28.71	1.01	1.48	46.45	5.69

BOARD 11

CATEGORIES	FTE-NC 1969	1976	%DIFF	NC:C*100 1969	1976	%DIFF	NC:P*100 1969	1976	%DIFF	NC:S 1976
BUS ADM-MAN/SUP	16.00	19.00	18.75	1.57	1.54	-1.77	0.05	0.09	76.08	0.25
-OTHER	44.00	21.00	-52.27	4.31	1.70	-60.52	0.14	0.10	-29.23	0.28
-TOTAL	60.00	40.00	-33.33	5.88	3.24	-44.86	0.20	0.19	-1.15	0.53
CSER-TOTAL	0.00	2.00	0.00	0.00	0.16	0.00	0.00	0.01	0.00	0.03
ED.SER-AUDIO VISUAL	3.00	16.00	433.33	0.29	1.30	341.15	0.01	0.08	690.83	0.21
-GUIDANCE&COUNSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-LIBRARY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-PSYCHOLOGICAL	9.00	12.00	33.33	0.88	0.97	10.29	0.03	0.06	97.71	0.16
-OTHER	0.00	2.00	0.00	0.00	0.16	0.00	0.00	0.01	0.00	0.03
-TOTAL	12.00	30.00	150.00	1.18	2.43	106.79	0.04	0.14	270.70	0.39
ATT,HLTH&FOOD SER-AT	3.00	7.00	133.33	0.29	0.57	93.00	0.01	0.03	245.99	0.09
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	5.00	5.00	0.00	0.49	0.41	-17.28	0.02	0.02	48.28	0.07
-TOTAL	8.00	12.00	50.00	0.78	0.97	24.07	0.03	0.06	122.42	0.16
PLOP-TOTAL	65.00	114.00	75.38	6.37	9.24	45.07	0.21	0.55	160.06	1.50
PLMT-TOTAL	55.00	61.00	10.91	5.39	4.95	-8.26	0.18	0.29	64.46	0.80
TRANS-ADMIN	0.00	5.00	0.00	0.00	0.41	0.00	0.00	0.02	0.00	0.07
-HOME-SCHOOL	22.10	46.00	108.14	2.17	3.73	72.17	0.07	0.22	208.64	0.61
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	22.10	51.00	130.77	2.17	4.13	90.88	0.07	0.25	242.19	0.67
INSTR-BOARD OFFICE	18.00	24.00	33.33	1.76	1.95	10.29	0.06	0.12	97.71	0.32
-SCHOOLS	20.00	60.50	202.50	1.96	4.90	150.22	0.07	0.29	348.55	0.80
-TOTAL	38.00	84.50	122.37	3.72	6.85	83.93	0.12	0.41	229.73	1.11
GRANDTOTAL	260.10	394.50	51.67	25.49	31.98	25.46	0.85	1.90	124.90	5.19

BOARD 12

CATEGORIES	FTE-NC			NC:C*100			NC:P*100			NC:S
	1974	1975	%DIFF	1974	1976	%DIFF	1974	1975	%DIFF	1976
BUS ADM-MAN/SUP	1.00	2.00	100.00	0.45	0.76	68.84	0.02	0.04	82.26	0.11
-OTHER	5.00	5.60	12.00	2.21	2.12	-5.45	0.10	0.10	2.07	0.29
-TOTAL	6.00	7.54	25.67	2.69	2.87	6.93	0.12	0.14	15.43	0.40
CSER-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ED.SER-AUDIO VISUAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-GUIDANCE&COUNSE	1.50	1.50	0.00	0.67	0.57	-15.58	0.03	0.03	-8.87	0.08
-LIBRARY	1.80	4.20	133.33	0.81	1.59	96.97	0.04	0.07	112.64	0.22
-PSYCHOLOGICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	3.30	5.70	72.73	1.48	2.16	45.81	0.06	0.10	57.41	0.30
ATT,HLTH&FOOD SER-AT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HEALTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-FOOD SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLOP-TOTAL	29.80	30.80	3.36	13.35	11.65	-12.75	0.58	0.55	-5.81	1.62
PLNT-TOTAL	1.00	2.00	100.00	0.45	0.76	68.84	0.02	0.04	82.26	0.11
TRANS-ADMIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-HOME-SCHOOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTR-BOARD OFFICE	4.00	3.00	-25.00	1.79	1.13	-36.67	0.08	0.05	-31.65	0.16
-SCHOOLS	9.00	11.40	26.67	4.03	4.31	6.93	0.18	0.20	15.44	0.60
-TOTAL	13.00	14.40	10.77	5.82	5.45	-6.39	0.25	0.26	0.94	0.76
GRANDTOTAL	53.10	60.50	13.94	23.79	22.88	-3.82	1.03	1.08	3.83	3.18

TOTAL SAMPLE

CATEGORIES	FTE-NC			NC:C*100			NC:P*100			NC:S
	1974	1975	%DIFF	1974	1976	%DIFF	1974	1975	%DIFF	1976
BUS ADM-MAN/SUP	78.00	97.20	24.62	0.59	0.74	25.30	0.02	0.03	38.43	0.14
-OTHER	304.10	280.10	-7.89	2.29	2.12	-7.39	0.10	0.10	2.32	0.38
-TOTAL	382.10	377.30	-1.26	2.88	2.86	-0.72	0.12	0.13	4.69	0.52
CSER-TOTAL	31.00	41.00	32.26	0.23	0.31	32.98	0.01	0.01	46.92	0.06
ED.SER-AUDIO VISUAL	92.60	145.50	57.13	0.70	1.10	57.99	0.03	0.05	74.55	0.20
-GUIDANCE&COUNSE	22.50	33.10	47.11	0.17	0.25	47.92	0.01	0.01	63.42	0.05
-LIBRARY	57.10	36.80	-35.55	0.43	0.28	-35.20	0.02	0.01	-28.41	0.05
-PSYCHOLOGICAL	72.80	91.50	25.69	0.55	0.69	26.38	0.02	0.03	39.62	0.13
-OTHER	3.30	39.90	1109.09	0.02	0.30	1115.71	0.00	0.01	1243.13	0.05
-TOTAL	248.30	346.80	39.67	1.87	2.63	40.43	0.08	0.12	55.15	0.48
ATT,HLTH&FOOD SER-AT	20.60	28.00	35.92	0.16	0.21	36.67	0.01	0.01	50.99	0.04
-HEALTH	50.80	0.00	-100.00	0.38	0.00	-100.00	0.02	0.00	-100.00	0.00
-FOOD SERVICES	30.50	17.20	-43.61	0.23	0.13	-43.30	0.01	0.01	-37.35	0.02
-TOTAL	101.90	45.20	-55.64	0.77	0.34	-55.40	0.03	0.02	-50.73	0.06
PLOP-TOTAL	1893.70	2038.40	7.64	14.28	15.46	8.23	0.59	0.71	19.57	2.80
PLNT-TOTAL	396.90	391.30	-1.41	2.99	2.97	-0.87	0.12	0.14	9.52	0.54
TRANS-ADMIN	12.90	20.40	58.14	0.10	0.15	59.01	0.00	0.01	75.67	0.03
-HOME-SCHOOL	167.70	98.20	-41.44	1.26	0.74	-41.12	0.05	0.03	-34.95	0.13
-OTHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-TOTAL	180.60	118.60	-34.33	1.36	0.90	-33.97	0.06	0.04	-27.05	0.16
INSTR-BOARD OFFICE	145.10	166.20	14.54	1.09	1.26	15.17	0.05	0.06	27.24	0.23
-SCHOOLS	694.30	801.10	15.38	5.24	6.13	17.03	0.22	0.28	29.29	1.11
-TOTAL	855.90	1001.40	17.00	6.46	7.60	17.69	0.27	0.35	30.02	1.34
GRANDTOTAL	4090.40	4360.30	6.60	30.85	33.07	7.18	1.28	1.52	18.42	5.98

APPENDIX I

Comparability of Data from Different Sources

Table I-1 compares data on the numbers of certificated and non-certificated staff from different sources. For some boards, the figures reported by the different sources agree, but for others there is considerable discrepancy. In the following comments we shall try to account for the differences in the data, and to explain how the choice of one data set rather than the other affected the values of various ratios obtained in this study.

Non-Certificated Staff

For non-certificated staff, data were obtained both directly from the local school board using the data collection instrument based on the *Uniform Code of Accounts* (Appendix A) and from the records of the Ontario Municipal Employees Retirement Board (OMERS). Boards were requested to provide data for the number of employees as of December 31, 1976, whereas the OMERS provided data for the number as of December 1977.

Not surprisingly, the OMERS data suggest fewer employees than do board data, since all but one of the school boards would have experienced a decline in enrolments during the intervening year. However, the difference in numbers of staff reported by the two sources is too great to be attributed to this cause alone. In fact, the major reason for the difference is that many board employees do not belong to OMERS, and therefore are not represented in the OMERS data. According to one board interviewee, the decision not to join OMERS is particularly prevalent among secretarial and clerical staff.

Since both sets of data are used in this study, albeit for different purposes, it is important to consider the implications of the discrepancy for the various staffing ratios. Board data were used to establish staffing trends and standards for non-certificated staff ratios. OMERS data were used to investigate the relationship between future supply and demand. Since the numbers of staff indicated by the OMERS data are, on the average, 10% smaller than those indicated by boards, the ratios of staff to students projected for the next ten years average 10% less than those that would be indicated by board data. However, if the age distribution of non-certificated board employees who do not belong to OMERS is the same as that for members, then the conclusions based upon the OMERS sample is applicable to all non-certificated staff. In this study, we assumed that the age distributions are similar, but it is an assumption that should be tested.

Certificated Staff

Data for certificated staff were also available from two sources, the boards themselves and the Ministry of Education publication *Enrolment and Staff Ratios, 1976* (Government of Ontario, 1977). The latter source indicated an average of 3% fewer staff than the former. This difference cannot be explained by the differences in dates (December 31, 1976 for board data and September 30, 1976 for Ministry data). One probable explanation is the different coding schemes used.

In the *Uniform Code of Accounts*, the categories under expenditures for instruction include one terms "Other Instructional." This category can include either certificated teachers or non-certificated support staff. Being unable to separate the two, we have counted them all as certificated staff. This cannot be the sole explanation for the discrepancies, however, since in several cases Ministry data indicate a higher number of certificated staff than do board data. We are unable to account for these differences.

Throughout this study, we have relied on the board data for numbers of certificated staff. As a result, the ratios of non-certificated to certificated staff will be lower than they would have been had Ministry data been used. For example, the overall ratio for non-certificated staff per 100 certificated staff is 33.07 using board data and 34.06 using Ministry data, a difference of 3%. Conversely, the number of certificated staff to pupils is higher using board data than it would be using Ministry data.

Conclusion

The difficulty of obtaining comparable data leads us to suggest a stronger link between the personnel records in boards, the *Uniform Code of Accounts*, and September 30th school reports. In particular, expenditure categories for certificated staff should be clearly separated from those for non-certificated staff. If an integrated system were developed much data could be transferred from the boards to the Ministry on data tapes, thereby avoiding the laborious coding and keying operations. The result would be more accurate, accessible, and timely information.

TABLE I-1

COMPARISON OF DATA FROM DIFFERENT SOURCES

Board	Non-Certificated Staff		Certificated Staff	
	1976 Board (Dec. 31)	1977 OMERS (Dec. 31)	1976 Board (Dec. 31)	Sept. 30, 1976 Enrolment and Staff Ratios ISRB - MOE
Board #1	1,970.0	1,961	5,283.5	5,196.1
Board #2	359.2	341	1,157.0	1,191.6
Board #3	335.1	253	872.0	866.5
Board #5	259.3	191	1,001.5	962.5
Board #6	563.5	486	1,916.0	1,844.8
Board #7	63.0	41	228.0	213.8
Board #9	25.0	22	97.0	102.0
Board #10	330.2	253	1,133.0	1,075.4
Board #11	394.5	331	1,233.5	1,082.8
Board #12	60.5	39	264.5	266.4
Total	4,360.3	3,918	13,186.0	12,801.9

APPENDIX J

Projections of Demand for Non-Certificated Staff by Functional Positions, 1977 to 1986

BOARD 1-E

PROJECTIONS OF FTE OF STAFF FOR THE NEXT 10 YEARS

CODE	FTE-1970	SALARY	FTE-1976	SALARY	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
10320	10.7	53.	17.0	125.	16.3	15.5	14.7	13.9	13.1	12.3	11.7	11.2	10.9	10.5
10330	13.0	247.	30.0	734.	28.7	27.4	26.0	24.5	23.0	21.8	20.7	19.8	19.1	18.6
10350	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10370	14.0	167.	9.0	148.	8.6	8.2	7.8	7.3	6.9	6.5	6.2	5.9	5.7	5.6
10390	148.0	964.	131.5	1324.	125.9	120.2	114.0	107.4	101.0	95.3	90.5	86.8	83.9	81.3
10399	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20330	4.0	42.	4.0	44.	3.8	3.7	3.5	3.3	3.1	2.9	2.8	2.6	2.6	2.5
20370	22.0	172.	22.0	235.	21.1	20.1	19.1	18.0	16.9	16.0	15.1	14.5	14.0	13.6
20390	1.0	5.	1.0	11.	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6
20399	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32330	120.2	2120.	31.5	1285.	30.1	28.8	27.3	25.7	24.2	22.8	21.7	20.8	20.1	19.5
32350	0.0	0.	50.5	1176.	48.3	46.1	43.8	41.2	38.8	36.6	34.8	33.3	32.2	31.2
32390	80.8	494.	80.0	837.	76.6	73.1	69.4	65.3	61.4	58.0	55.1	52.8	51.1	49.5
34390	397.0	2313.	345.5	3372.	330.7	315.7	299.5	282.1	265.3	250.5	237.9	228.1	220.5	213.6
34399	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36130	257.8	5202.	259.0	7833.	247.9	236.7	224.5	211.5	198.3	187.8	178.3	171.0	165.3	160.2
36230	4875.4	42220.	4488.0	84355.	4295.2	4100.8	3890.7	3664.7	3446.5	3254.0	3090.3	2963.6	2864.4	2775.3
36330	80.2	1325.	48.5	1232.	46.4	44.3	42.0	39.6	37.2	35.2	33.4	32.0	31.0	30.0
38130	7.0	167.	6.0	215.	5.7	5.5	5.2	4.9	4.6	4.4	4.1	4.0	3.8	3.7
38230	250.4	2552.	331.0	6055.	316.8	302.4	287.0	270.3	254.2	240.0	227.9	218.6	211.3	204.7
38330	12.4	60.	69.0	437.	66.0	63.0	59.8	56.3	53.0	50.0	47.5	45.6	44.0	42.7
52350	2.0	37.	5.0	115.	4.8	4.6	4.3	4.1	3.8	3.6	3.4	3.3	3.2	3.1
52370	61.6	387.	68.0	771.	65.1	62.1	59.0	55.5	52.2	49.3	46.8	44.9	43.4	42.0
52390	9.0	45.	21.5	215.	20.6	19.6	18.6	17.6	16.5	15.6	14.8	14.2	13.7	13.3
54350	3.0	51.	1.0	25.	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6
54370	0.0	0.	1.0	1.	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6
54390	4.0	24.	1.0	11.	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6

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55050     2.4     43.     1.0     33.      1.0    0.9    0.9    0.8    0.8    0.7    0.7    0.7    0.6    0.6
55070    18.0     77.     2.0     33.      1.9    1.8    1.7    1.6    1.5    1.5    1.4    1.3    1.3    1.2
56090    19.0    167.     4.0     81.      3.8    3.7    3.5    3.3    3.1    2.9    2.8    2.6    2.6    2.5
58050     1.0     24.     1.0     37.      1.0    0.9    0.9    0.8    0.8    0.7    0.7    0.7    0.6    0.6
58070    44.0    514.    46.0    931.     44.0   42.0   39.9   37.6   35.3   33.4   31.7   30.4   29.4   28.4
58090     7.0     46.     9.0     95.      8.6    8.2    7.8    7.3    6.9    6.5    6.2    5.9    5.7    5.6
59050     1.4     22.     4.0     84.      3.8    3.7    3.5    3.3    3.1    2.9    2.8    2.6    2.6    2.5
59070     1.0     26.     2.0     41.      1.9    1.8    1.7    1.6    1.5    1.5    1.4    1.3    1.3    1.2
59090     0.9      7.     3.0     35.      2.9    2.7    2.6    2.4    2.3    2.2    2.1    2.0    1.9    1.9
59390     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
62050     1.0     17.     1.0     28.      1.0    0.9    0.9    0.8    0.8    0.7    0.7    0.7    0.6    0.6
62070     6.0     61.    10.0    175.      9.6    9.1    8.7    8.2    7.7    7.3    6.9    6.6    6.4    6.2
62090     2.0     12.     1.5     17.      1.4    1.4    1.3    1.2    1.2    1.1    1.0    1.0    1.0    0.9
62390     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
64050     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
64070    47.8    217.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
64090     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
66050     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
66070     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
66090     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
70050    10.0    117.    14.0    274.     13.4   12.8   12.1   11.4   10.8   10.2    9.6    9.2    8.9    8.7
70070   863.1   6707.   898.0  11329.    859.4  820.5  778.5  733.3  689.6  651.1  618.3  593.0  573.1  555.3
70090     2.0     11.     3.0     45.      2.9    2.7    2.6    2.4    2.3    2.2    2.1    2.0    1.9    1.9
70390     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
75050     5.8     50.    30.0    674.     28.7   27.4   26.0   24.5   23.0   21.8   20.7   19.8   19.1   18.6
75070   228.0   2066.   162.0   2733.    155.0  148.0  140.4  132.3  124.4  117.5  111.5  107.0  103.4  100.2
75090     6.0     43.     7.0     32.      6.7    6.4    6.1    5.7    5.4    5.1    4.8    4.6    4.5    4.3
75390     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
76050     2.0     21.     3.0     52.      2.9    2.7    2.6    2.4    2.3    2.2    2.1    2.0    1.9    1.9
76090     5.0     28.     4.0     41.      3.8    3.7    3.5    3.3    3.1    2.9    2.8    2.6    2.6    2.5
76390     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
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77373   110.0    699.   41.0    574.     42.1   40.2   38.1   35.9   33.8   31.9   30.1   29.1   28.1   27.2
78373     0.0      0.    0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
80373     0.0      0.    0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
81373     0.0      0.    0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
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BOARD 2-E

PROJECTIONS OF FTES OF STAFF FOR THE NEXT 10 YEARS

CODE	FTE-1969	SALARY	FTE-1976	SALARY	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
10320	17.0	33.	17.0	55.	16.5	15.9	15.3	14.9	14.4	14.0	13.7	13.5	13.1	13.1
10330	3.0	51.	2.0	55.	1.9	1.9	1.8	1.8	1.7	1.6	1.5	1.6	1.5	1.5
10350	3.0	37.	3.0	52.	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3
10370	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10390	10.0	38.	20.5	231.	19.9	19.2	18.5	18.0	17.4	16.9	16.5	16.3	15.8	15.4
10990	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20330	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20370	0.0	0.	2.0	17.	1.9	1.9	1.8	1.8	1.7	1.6	1.5	1.6	1.5	1.5
20390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20990	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32330	12.0	202.	7.0	235.	6.8	6.6	6.3	6.1	5.9	5.8	5.7	5.6	5.4	5.4
32350	11.0	100.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32390	9.0	36.	7.0	55.	6.8	6.6	6.3	6.1	5.9	5.8	5.7	5.6	5.4	5.4
34390	62.0	182.	79.0	631.	76.8	74.0	71.2	69.2	67.1	65.0	63.3	62.7	60.9	60.8
34990	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36130	85.0	1038.	91.0	2398.	88.5	85.2	82.1	79.7	77.3	74.9	73.6	72.2	71.2	70.0
36230	921.0	7183.	1059.0	18052.	1029.1	991.4	954.9	927.3	899.8	871.2	856.5	840.5	817.0	811.6
36330	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38130	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38230	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38330	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52350	0.0	0.	1.0	29.	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
52370	0.0	0.	6.0	45.	5.9	5.6	5.4	5.3	5.1	4.9	4.9	4.8	4.6	4.6
52390	0.0	0.	3.0	19.	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3
54350	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54370	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

56050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58070	0.0	0.	3.5	53.	3.4	3.3	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7
58090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59070	0.0	0.	25.0	333.	24.3	23.4	22.5	21.9	21.2	20.6	20.2	19.8	19.3	19.2
59090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59190	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62070	0.0	0.	1.0	14.	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
62090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62190	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64070	3.0	15.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70050	1.5	15.	4.0	57.	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.1
70070	159.0	608.	176.5	1921.	171.6	165.2	159.1	154.5	150.0	145.2	142.8	140.1	136.2	135.8
70090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70190	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75050	1.0	13.	2.0	35.	1.9	1.9	1.8	1.8	1.7	1.6	1.6	1.6	1.5	1.5
75070	6.0	43.	17.0	213.	16.5	15.9	15.3	14.9	14.8	14.0	13.7	13.5	13.1	13.1
75090	3.0	14.	2.0	13.	1.9	1.9	1.8	1.8	1.7	1.6	1.6	1.6	1.5	1.5
75190	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76050	1.0	8.	1.5	15.	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.2	1.2	1.2
76090	0.5	2.	1.0	7.	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
76190	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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77370     0.1     1.     2.2     13.     2.1     2.1     2.0     1.9     1.9     1.8     1.8     1.7     1.7     1.7
78370     0.0     0.     0.0     0.      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
80370     0.0     0.     0.0     0.      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
81370     0.0     0.     0.0     0.      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
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BOARD 3-1

PROJECTIONS OF NOS OF STAFF FOR THE NEXT 10 YEARS

CODE	FTE-1969	SALARY	FTE-1976	SALARY	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
10020	17.0	40.	18.0	91.	17.6	17.1	16.5	16.1	15.8	15.3	15.0	14.8	14.7	14.7
10030	2.5	14.	2.5	91.	2.4	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0
10050	6.0	17.	8.0	94.	7.8	7.6	7.4	7.2	7.0	6.8	6.7	6.6	6.5	6.5
10070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10090	8.0	26.	12.0	33.	11.7	11.4	11.0	10.8	10.5	10.2	10.0	9.9	9.8	9.8
10990	1.0	5.	3.0	19.	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.4
20010	3.0	26.	3.0	53.	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.4
20070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20090	2.0	13.	4.0	41.	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.3	3.3
20990	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32030	7.0	152.	8.0	232.	7.8	7.6	7.4	7.2	7.0	6.8	6.7	6.6	6.5	6.5
32050	2.0	14.	2.0	27.	2.0	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6
32090	4.0	21.	7.0	57.	6.8	6.6	6.4	6.3	6.1	6.0	5.8	5.8	5.7	5.7
34090	31.0	130.	35.0	335.	34.2	33.2	32.2	31.4	30.7	29.8	29.1	28.8	28.7	28.5
34990	15.5	54.	25.5	110.	24.9	24.2	23.4	22.8	22.3	21.7	21.2	21.0	20.9	20.8
36100	61.0	101.	59.0	1737.	57.6	55.9	54.2	52.9	51.7	50.3	49.1	48.6	48.3	48.1
36200	731.0	7182.	769.0	12615.	750.4	729.0	706.6	689.0	673.6	655.0	640.2	633.4	629.5	626.6
36300	0.5	3.	2.5	13.	2.4	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0
38100	0.0	0.	2.0	45.	2.0	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6
38200	23.0	355.	29.5	538.	28.8	28.0	27.1	26.4	25.8	25.1	24.6	24.3	24.1	24.0
38300	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52070	1.5	13.	4.0	39.	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.3	3.3	3.3
52090	1.0	6.	2.0	20.	2.0	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6
54050	2.0	33.	3.0	53.	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.4
54070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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56350	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56370	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58350	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58370	3.0	37.	4.5	35.	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.7	3.7	3.7
58390	1.0	3.	1.5	9.	1.5	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.2
59350	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59370	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59330	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62350	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62370	1.5	13.	2.0	27.	2.0	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6
62390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62330	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64350	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64370	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66350	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66370	6.0	34.	10.0	99.	9.8	9.5	9.2	9.0	8.8	8.5	8.3	8.2	8.2	8.1
66390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70350	2.0	23.	2.0	18.	2.0	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6
70370	149.0	718.	192.1	1932.	187.5	182.1	176.5	172.1	168.3	163.6	159.9	158.2	157.3	156.5
70390	1.0	6.	2.0	19.	2.0	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6
70330	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75350	2.0	31.	3.0	55.	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.4
75370	6.0	92.	9.0	112.	8.8	8.5	8.3	8.1	7.9	7.7	7.5	7.4	7.4	7.3
75390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75330	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76350	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76330	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

BOARD 5-1

PROJECTIONS OF FTES OF STAFF FOR THE NEXT 10 YEARS

CODE	FTE-1971	SALARY	FTE-1976	SALARY	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
10020	16.0	28.	17.0	39.	17.0	16.8	16.7	16.5	16.3	16.1	16.0	15.9	15.9	15.9
10030	3.0	59.	1.0	33.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
10050	3.0	29.	4.0	39.	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7
10070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10090	14.5	67.	16.5	133.	16.5	16.3	16.2	16.0	15.8	15.6	15.5	15.4	15.4	15.5
10330	1.5	7.	1.0	8.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
20030	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32030	2.0	56.	2.0	42.	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9
32050	6.0	121.	5.0	203.	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.7	4.7	4.7
32090	5.0	28.	5.0	45.	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.7	4.7	4.7
34090	47.0	196.	66.7	395.	66.8	66.0	65.5	64.6	63.8	63.2	62.6	62.4	62.3	62.5
34390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36100	72.0	1114.	71.0	1738.	71.1	70.3	69.7	68.7	67.9	67.3	66.6	66.5	66.3	66.5
36200	811.0	7599.	807.0	13559.	808.0	798.7	792.1	781.1	771.7	765.1	757.3	755.5	753.9	756.1
36300	51.0	477.	82.5	1327.	82.6	81.7	81.0	79.9	78.9	78.2	77.4	77.2	77.1	77.3
38100	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38200	26.0	235.	32.0	519.	32.0	31.7	31.4	31.0	30.6	30.3	30.0	30.0	29.9	30.0
38300	1.4	8.	2.0	13.	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9
52050	1.0	12.	1.0	20.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
52070	1.0	8.	1.0	13.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
52090	2.0	6.	3.0	25.	3.0	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8
54050	1.0	15.	1.0	24.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
54070	6.0	53.	7.6	108.	7.6	7.5	7.5	7.4	7.3	7.2	7.1	7.1	7.1	7.1
54090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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56050	1.0	14.	1.0	23.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
56070	0.0	0.	4.8	15.	4.8	4.8	4.7	4.6	4.6	4.6	4.5	4.5	4.5	4.5
56090	2.5	12.	0.8	5.	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7
58050	1.0	15.	1.0	24.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
58070	1.0	12.	1.0	19.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
58090	1.0	5.	1.0	10.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
59050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59070	0.0	0.	2.9	54.	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.7
59090	0.0	0.	1.0	7.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
59390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66070	1.5	8.	2.2	11.	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1
66090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70050	9.5	74.	4.1	14.	4.1	4.1	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.8
70070	120.0	777.	108.3	1130.	108.4	107.2	106.3	104.8	103.6	102.7	101.6	101.4	101.2	101.5
70090	1.0	5.	1.0	9.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
70390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75050	2.0	23.	4.0	52.	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.7	3.7	3.7
75070	19.8	135.	17.0	230.	17.0	16.8	16.7	16.5	16.3	16.1	16.0	15.9	15.9	15.9
75090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76050	1.0	10.	1.0	15.	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
76090	0.4	3.	0.4	4.	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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77070     12.0     36.     0.0      0.     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
79070      0.0      0.     0.0      0.     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
80070      0.0      0.     0.0      0.     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
81070      0.0      0.     0.0      0.     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
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BOARD 6-1

PROJECTIONS OF NOS OF STAFF FOR THE NEXT 10 YEARS

CODE	FTE-1969	SALARY	FTE-1976	SALARY	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
10020	33.0	70.	29.0	57.	27.8	27.0	26.2	25.5	24.7	24.0	23.4	22.9	22.6	22.4
10030	2.0	44.	2.0	77.	1.9	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.6	1.5
10050	12.0	122.	11.0	214.	10.5	10.2	10.0	9.7	9.5	9.1	8.9	8.7	8.6	8.5
10070	1.0	6.	1.0	25.	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
10090	30.0	137.	24.0	213.	23.0	22.3	21.7	21.1	20.6	19.9	19.3	19.0	18.7	18.5
10390	1.0	6.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20010	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20070	0.0	0.	1.0	15.	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
20090	0.0	0.	2.0	18.	1.9	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.6	1.5
20390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32030	3.0	82.	3.0	125.	2.9	2.8	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3
32050	31.0	544.	28.0	735.	26.8	26.1	25.3	24.6	24.1	23.2	22.6	22.1	21.9	21.6
32090	9.0	40.	16.0	140.	15.3	14.9	14.5	14.1	13.8	13.3	12.9	12.7	12.5	12.4
34090	85.3	515.	118.0	1059.	113.1	109.8	106.7	103.8	101.1	97.7	95.1	93.3	92.1	91.1
34390	1.0	4.	2.0	17.	1.9	1.9	1.8	1.8	1.7	1.7	1.5	1.6	1.6	1.5
36100	160.0	2282.	132.0	3544.	126.5	122.9	119.4	116.1	113.4	109.3	106.1	104.4	103.0	102.0
36200	1784.5	14130.	1510.0	25240.	1447.5	1405.6	1365.9	1328.2	1297.7	1250.7	1216.9	1194.5	1178.7	1166.4
36300	14.3	80.	42.0	327.	40.3	39.1	38.0	36.9	36.1	34.8	33.8	33.2	32.8	32.4
38100	3.0	51.	4.0	124.	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.2	3.1	3.1
38200	135.0	1077.	197.0	3241.	188.8	183.4	178.2	173.1	169.3	163.2	158.8	155.8	153.8	152.2
38300	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52050	1.0	19.	1.0	23.	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
52070	4.0	24.	6.0	73.	5.8	5.6	5.4	5.3	5.2	5.0	4.8	4.7	4.7	4.6
52090	3.0	12.	3.0	29.	2.9	2.8	2.7	2.6	2.6	2.5	2.4	2.4	2.3	2.3
54050	1.0	18.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54090	4.0	20.	16.0	122.	15.3	14.9	14.5	14.1	13.8	13.3	12.9	12.7	12.5	12.4

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56050     1.0     13.     1.0     25.      1.0    0.9    0.9    0.9    0.9    0.8    0.8    0.8    0.8    0.8
56070    10.0     33.    10.0     77.      9.6    9.3    9.0    8.9    8.6    8.3    8.1    7.9    7.8    7.7
56090     2.0     16.     1.0     10.      1.0    0.9    0.9    0.9    0.9    0.8    0.8    0.8    0.8    0.8
58050     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
58070     3.0     24.     5.0    113.      4.8    4.7    4.5    4.4    4.3    4.1    4.0    4.0    3.9    3.9
58090     0.0      0.     2.0     12.      1.9    1.9    1.8    1.8    1.7    1.7    1.6    1.6    1.6    1.5
59050     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
59070     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
59090     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
59190     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
62050     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
62070     2.5     18.     2.5     23.      2.3    2.3    2.3    2.2    2.1    2.1    2.0    2.0    2.0    1.9
62090     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
62190     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
64050     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
64070     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
64090     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
66050     2.0      6.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
66070    15.0     42.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
66090     1.0      3.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
70050     5.0     44.     3.0     35.      2.9    2.8    2.7    2.6    2.6    2.5    2.4    2.4    2.3    2.3
70070   292.3   1693.   273.5   2813.    262.2  254.6  247.4  240.6  235.1  226.5  220.4  216.4  213.5  211.3
70090     0.5      6.     1.0     10.      1.0    0.9    0.9    0.9    0.9    0.8    0.8    0.8    0.8    0.8
70190     4.0     14.     7.0     73.      6.7    6.5    6.3    6.2    6.0    5.8    5.5    5.5    5.5    5.4
75050     8.0     76.     4.0     75.      3.8    3.7    3.6    3.5    3.4    3.3    3.2    3.2    3.1    3.1
75070    25.0    182.    36.5    517.     35.0   34.0   33.0   32.1   31.4   30.2   29.4   28.9   28.5   28.2
75090     0.5      2.     1.5     11.      1.4    1.4    1.4    1.3    1.3    1.2    1.2    1.2    1.2    1.2
75190     4.0     22.     4.0     35.      3.8    3.7    3.6    3.5    3.4    3.3    3.2    3.2    3.1    3.1
76050     1.0     12.     1.0     17.      1.0    0.9    0.9    0.9    0.9    0.8    0.8    0.8    0.8    0.8
76090     0.0      0.     1.5     11.      1.4    1.4    1.4    1.3    1.3    1.2    1.2    1.2    1.2    1.2
76190     0.0      0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
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77070    23.5    80.    6.0    54.     5.8   5.6   5.4   5.3   5.2   5.0   4.8   4.7   4.7   4.5
78070     0.0     0.    0.0     0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
80070     0.0     0.    0.0     0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
81070     0.0     0.    0.0     0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
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BOARD 7-T

PROJECTIONS OF NOS OF STAFF FOR THE NEXT 10 YEARS

CODE	FTE-1970	SALARY	FTE-1976	SALARY	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
10020	15.0	17.	15.0	25.	14.1	13.9	13.4	12.9	12.4	12.1	11.9	11.7	11.6	11.5
10030	1.0	18.	1.0	23.	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
10050	1.0	8.	1.0	13.	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
10070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10090	7.0	33.	5.0	16.	4.8	4.6	4.5	4.3	4.1	4.0	4.0	3.9	3.9	3.8
10190	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20010	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20190	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32030	1.0	25.	1.0	38.	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
32050	5.0	51.	1.0	15.	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
32090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34090	12.0	57.	11.0	113.	10.6	10.2	9.8	9.5	9.1	8.9	8.7	8.6	8.5	8.4
34190	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36100	17.0	235.	18.0	432.	17.3	16.7	16.1	15.5	14.9	14.6	14.2	14.0	14.0	13.8
36200	242.0	2047.	205.7	3696.	197.8	190.4	184.2	177.4	170.7	166.3	162.7	160.3	159.7	157.6
36300	5.6	28.	2.3	17.	2.2	2.1	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8
38100	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38200	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38300	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52050	1.0	12.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52070	0.0	0.	2.0	13.	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.5
52090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54090	0.0	0.	1.0	8.	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8

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56050     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
56070     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
56090     2.0     9.     5.0     11.      4.8    4.6    4.5    4.3    4.1    4.0    4.0    3.9    3.9    3.8
58050     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
58070     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
58090     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
59050     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
59070     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
59090     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
59390     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
62050     1.0     7.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
62070     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
62090     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
62390     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
64050     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
64070     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
64090     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
66050     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
66070     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
66090     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
70050     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
70070    26.0   186.    29.0    308.     27.9   26.8   26.0   25.0   24.1   23.4   22.9   22.6   22.5   22.2
70090     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
70390     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
75050     2.0    18.     1.0     18.      1.0    0.9    0.9    0.9    0.8    0.8    0.8    0.8    0.8    0.8
75070     3.0    22.     7.0     93.      6.7    6.5    6.3    6.0    5.8    5.7    5.5    5.5    5.4    5.4
75090     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
75390     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
76050     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
76090     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
76390     0.0     0.     0.0      0.      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
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BOARD 9

PROJECTIONS OF NOS OF STAFF FOR THE NEXT 10 YEARS

CODE	FTE-1969	SALARY	FTE-1976	SALARY	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
10020	8.0	10.	8.0	10.	7.4	7.3	7.1	7.1	7.0	6.9	6.9	6.9	6.9	6.9
10030	3.0	20.	2.0	38.	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7
10050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10090	1.5	6.	2.0	12.	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7
10390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20030	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32030	1.0	18.	1.0	37.	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
32050	0.5	6.	2.0	49.	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7
32090	0.2	1.	2.0	17.	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7
34090	0.0	0.	5.0	27.	4.6	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.3
34390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36100	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36200	99.0	581.	87.5	1379.	80.9	79.5	77.1	77.1	76.3	75.8	75.8	75.2	75.0	75.0
36300	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38100	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38200	4.0	26.	6.5	57.	6.0	5.9	5.7	5.7	5.7	5.6	5.6	5.6	5.6	5.6
38300	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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56050    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
56070    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
56090    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
58050    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
58070    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
58090    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
59050    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
59070    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
59090    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
59390    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
62050    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
62070    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
62090    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
62390    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
64050    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
64070    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
64090    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
66050    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
66070    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
66090    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
70050    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
70070   11.0   47.   12.0  116.    11.1  10.9  10.6  10.6  10.5  10.4  10.4  10.3  10.3  10.3
70090    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
70390    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
75050    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
75070    1.0    6.    2.0   28.     1.8   1.8   1.8   1.8   1.7   1.7   1.7   1.7   1.7   1.7
75090    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
75390    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
76050    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
76090    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
76390    0.0    0.    0.0    0.     0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
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BOARD 10

PROJECTIONS OF NOS OF STAFF FOR THE NEXT 10 YEARS

CODE	FTE-1971	SALARY	FTE-1976	SALARY	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
10020	16.0	39.	16.0	79.	15.4	14.7	14.1	13.4	13.0	12.5	12.2	11.9	11.6	11.4
10030	4.0	85.	3.0	33.	2.9	2.8	2.6	2.5	2.4	2.3	2.3	2.2	2.2	2.1
10050	4.5	47.	5.7	88.	5.5	5.2	5.0	4.8	4.6	4.5	4.3	4.2	4.1	4.1
10070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10090	17.6	106.	28.0	237.	26.9	25.7	24.6	23.5	22.7	21.9	21.3	20.8	20.3	19.9
10390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20030	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32030	2.0	55.	3.0	108.	2.9	2.8	2.6	2.5	2.4	2.3	2.3	2.2	2.2	2.1
32050	9.4	165.	13.0	354.	12.5	11.9	11.4	10.9	10.5	10.2	9.9	9.6	9.4	9.3
32090	15.1	91.	22.2	193.	21.3	20.4	19.5	18.6	18.0	17.4	16.9	16.5	16.1	15.8
34090	31.0	185.	76.0	571.	73.0	69.7	66.9	63.7	61.5	59.5	57.7	56.4	55.1	54.1
34390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36100	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36200	1056.0	8914.	1074.0	16337.	1032.3	985.5	944.9	900.1	869.5	841.1	816.0	796.7	779.2	765.2
36300	0.0	0.	43.0	649.	41.3	39.5	37.8	36.0	34.8	33.7	32.7	31.9	31.2	30.6
38100	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38200	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38300	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52050	1.0	14.	1.0	21.	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7
52070	0.5	2.	1.0	15.	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7
52090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

56050	1.0	15.	1.0	27.	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7
56070	0.4	3.	1.0	5.	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7
56090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58070	1.8	24.	4.0	19.	3.8	3.7	3.5	3.4	3.2	3.1	3.0	3.0	2.9	2.8
58090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62070	3.0	29.	3.0	45.	2.9	2.8	2.6	2.5	2.4	2.3	2.3	2.2	2.2	2.1
62090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70050	2.0	20.	4.0	54.	3.8	3.7	3.5	3.4	3.2	3.1	3.0	3.0	2.9	2.8
70070	140.0	878.	159.0	1814.	152.8	145.9	139.9	133.3	128.7	124.5	120.8	118.0	115.4	113.3
70090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75050	2.8	29.	3.0	59.	2.9	2.8	2.6	2.5	2.4	2.3	2.3	2.2	2.2	2.1
75070	15.0	132.	16.3	213.	15.7	15.0	14.3	13.7	13.2	12.8	12.4	12.1	11.8	11.6
75090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76050	1.0	10.	1.0	19.	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7
76090	1.0	5.	1.0	9.	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7
76390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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BOARD 11

                                        PROJECTIONS OF NOS OF STAFF FOR THE NEXT 10 YEARS

CODE  FTE-1969   SALARY FTE-1976   SALARY       1977     1978     1979     1980     1981     1982     1983     1984     1985     1986

10020     10.0      25.     16.0      77.       15.0     13.9     13.1     12.5     12.4     11.5     11.0     10.5     10.1      9.8

10030      9.0     153.      6.0     153.        5.6      5.2      4.9      4.7      4.6      4.3      4.1      4.0      3.8      3.7

10050      7.0      64.     13.0     178.       12.2     11.3     10.6     10.1     10.1      9.3      8.9      8.6      8.2      7.9

10070      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

10090     44.0      86.     21.0     237.       19.7     18.3     17.1     16.4     16.2     15.1     14.4     13.8     13.3     12.8

10390      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

20030      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

20070      0.0       0.      2.0      25.        1.9      1.7      1.6      1.6      1.5      1.4      1.4      1.3      1.3      1.2

20090      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

20390      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

32030      0.0       0.      3.0     126.        2.8      2.6      2.4      2.3      2.3      2.2      2.1      2.0      1.9      1.8

32050     31.0     320.     55.0    1035.       51.7     47.9     44.9     42.9     42.5     39.5     37.7     36.2     34.8     33.6

32090     18.0     125.     24.0     252.       22.5     20.9     19.6     18.7     18.6     17.2     16.5     15.8     15.2     14.7

34030     20.0      67.     60.5     453.       56.8     52.7     49.4     47.2     46.8     43.4     41.5     39.9     38.3     37.0

34390      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

36130      0.0       0.     91.0    2223.       85.5     79.3     74.2     71.0     70.4     65.3     62.4     60.0     57.6     55.6

36230    913.8    8698.    951.5   13585.      893.9    829.1    776.2    742.1    735.7    683.3    652.8    627.1    602.2    581.1

36330     26.9     325.     28.0     538.       26.3     24.4     22.8     21.8     21.7     20.1     19.2     18.5     17.7     17.1

38130      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

38230     48.6     450.    105.0    1458.       98.6     91.5     85.7     81.9     81.2     75.4     72.0     69.2     66.5     64.1

38330      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

52050      1.0       6.      4.0      37.        3.8      3.5      3.3      3.1      3.1      2.9      2.7      2.6      2.5      2.4

52070      0.0       0.      3.0      39.        2.8      2.6      2.4      2.3      2.3      2.2      2.1      2.0      1.9      1.8

52090      2.0       8.      9.0      82.        8.5      7.8      7.3      7.0      7.0      6.5      6.2      5.9      5.7      5.5

54050      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

54070      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0

54090      0.0       0.      0.0       0.        0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
```

56050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58050	9.0	130.	12.0	251.	11.3	10.5	9.8	9.4	9.3	8.6	8.2	7.9	7.6	7.3
58070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59050	0.0	0.	2.0	22.	1.9	1.7	1.6	1.6	1.5	1.4	1.4	1.3	1.3	1.2
59070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62050	3.0	43.	5.0	87.	4.7	4.4	4.1	3.9	3.9	3.6	3.4	3.3	3.2	3.1
62070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62090	0.0	0.	2.0	17.	1.9	1.7	1.6	1.6	1.5	1.4	1.4	1.3	1.3	1.2
62390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66070	5.0	29.	5.0	32.	4.7	4.4	4.1	3.9	3.9	3.6	3.4	3.3	3.2	3.1
66090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70050	0.0	0.	7.0	122.	6.6	6.1	5.7	5.5	5.4	5.0	4.8	4.6	4.4	4.3
70070	65.0	476.	106.0	1342.	99.6	92.4	86.5	82.7	82.0	76.1	72.7	69.9	67.1	64.7
70090	0.0	0.	1.0	10.	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6
70390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75050	0.0	0.	6.0	110.	5.6	5.2	4.9	4.7	4.6	4.3	4.1	4.0	3.8	3.7
75070	55.0	383.	52.0	650.	48.9	45.3	42.4	40.6	40.2	37.3	35.7	34.3	32.9	31.8
75090	0.0	0.	3.0	32.	2.8	2.6	2.4	2.3	2.3	2.2	2.1	2.0	1.9	1.8
75390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76050	0.0	0.	4.0	54.	3.8	3.5	3.3	3.1	3.1	2.9	2.7	2.6	2.5	2.4
76090	0.0	0.	1.0	10.	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6
76390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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77370     22.1     176.     46.0     533.      43.2     40.1     37.5     35.9     35.6     33.0     31.6     30.3     29.1     28.1
78370      0.0       0.      0.0       0.       0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
80370      0.0       0.      0.0       0.       0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
81370      0.0       0.      0.0       0.       0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
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BOARD 12

                                                   PROJECTIONS OF NOS OF STAFF FOR THE NEXT 10 YEARS

CODE  FTE-1974   SALARY FTE-1976   SALARY        1977     1978     1979     1980     1981     1982     1983     1984     1985     1986
10020     14.0      26.    14.0      34.         14.2     14.4     14.6     14.9     15.3     15.7     16.0     16.2     16.5     16.7
10030      1.0      18.     1.0      23.          1.0      1.0      1.0      1.1      1.1      1.1      1.1      1.2      1.2      1.2
10050      0.0       0.     1.0       9.          1.0      1.0      1.0      1.1      1.1      1.1      1.1      1.2      1.2      1.2
10070      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
10090      5.0      31.     5.6      45.          5.7      5.8      5.8      6.0      6.1      6.3      6.4      6.5      6.6      6.7
10390      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
20030      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
20070      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
20090      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
20390      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
32030      2.0      51.     2.0      53.          2.0      2.1      2.1      2.1      2.2      2.2      2.3      2.3      2.4      2.4
32050      4.0      62.     4.5      36.          4.6      4.6      4.7      4.8      4.9      5.0      5.1      5.2      5.3      5.4
32090      4.0      21.     3.0      23.          3.0      3.1      3.1      3.2      3.3      3.4      3.4      3.5      3.5      3.6
34090      9.0      21.    11.4      59.         11.6     11.7     11.9     12.1     12.4     12.8     13.0     13.2     13.4     13.6
34390      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
36100     25.0     422.    29.0     620.         29.4     29.8     30.2     30.9     31.6     32.4     33.1     33.5     34.1     34.5
36200    187.4    1792.   220.2    2932.        223.3    226.5    229.2    234.7    240.1    246.4    251.2    254.6    259.2    262.3
36300      4.8      66.     8.7     113.          8.8      8.9      9.1      9.3      9.5      9.7      9.9     10.1     10.2     10.4
38100      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
38200      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
38300      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
52050      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
52070      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
52090      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
54050      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
54070      1.5      21.     1.5      23.          1.5      1.5      1.6      1.6      1.6      1.7      1.7      1.7      1.8      1.8
54090      0.0       0.     0.0       0.          0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
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56050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56070	1.8	3.	4.2	17.	4.3	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.9	5.0
56090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66070	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70050	1.0	12.	1.0	15.	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2
70070	28.8	208.	29.8	234.	30.2	30.6	31.0	31.8	32.5	33.3	34.0	34.4	35.1	35.5
70090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75070	1.0	10.	2.0	24.	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4
75090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TOTAL SAMPLE

PROJECTIONS OF NOS OF STAFF FOR THE NEXT 10 YEARS

CODE	FTE-1970	SALARY	FTE-1976	SALARY	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
10020	156.7	351.	167.0	610.	160.8	154.5	148.3	142.2	136.8	131.2	126.9	123.7	121.4	119.7
10030	41.5	739.	50.5	1342.	48.6	46.7	44.8	43.0	41.4	39.7	38.4	37.4	36.7	36.2
10050	36.5	354.	46.7	755.	45.0	43.2	41.5	39.8	38.3	36.7	35.5	34.6	33.9	33.5
10070	15.0	173.	10.0	213.	9.6	9.3	8.9	8.5	8.2	7.9	7.6	7.4	7.3	7.2
10090	285.6	1494.	266.1	2514.	256.2	246.2	236.3	226.6	218.0	209.1	202.1	197.1	193.4	190.7
10390	3.5	18.	4.0	27.	3.9	3.7	3.6	3.4	3.3	3.1	3.0	3.0	2.9	2.9
20030	6.0	68.	7.0	137.	6.7	6.5	6.2	6.0	5.7	5.5	5.3	5.2	5.1	5.0
20070	22.0	172.	27.0	353.	26.0	25.0	24.0	23.0	22.1	21.2	20.5	20.0	19.6	19.4
20090	3.0	18.	7.0	70.	6.7	6.5	6.2	6.0	5.7	5.5	5.3	5.2	5.1	5.0
20390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32030	158.2	2761.	61.5	2392.	59.2	56.9	54.6	52.4	50.4	48.3	46.7	45.6	44.7	44.1
32050	99.9	1383.	161.0	3751.	155.0	149.0	143.0	137.1	131.9	126.5	122.3	119.3	117.0	115.4
32090	145.1	857.	166.2	1685.	160.0	153.8	147.6	141.5	136.2	130.6	126.3	123.1	120.8	119.1
34090	694.3	3666.	808.1	7027.	778.1	747.8	717.6	688.2	662.0	635.0	613.9	598.6	587.3	579.2
34390	16.5	58.	27.5	157.	26.5	25.4	24.4	23.4	22.5	21.6	20.9	20.4	20.0	19.7
36100	677.8	10394.	750.0	20631.	722.1	694.0	666.0	638.7	614.4	589.3	569.7	555.6	545.0	537.6
36200	11621.1	100646.	11171.9	192510.	10756.8	10338.1	9921.2	9513.6	9152.4	8778.2	8486.5	8275.6	8118.9	8008.0
36300	183.3	2304.	257.5	4151.	247.9	238.3	228.7	219.3	211.0	202.3	195.6	190.7	187.1	184.6
38100	10.0	218.	12.0	335.	11.6	11.1	10.7	10.2	9.8	9.4	9.1	8.9	8.7	8.6
38200	494.0	4695.	701.0	11929.	675.0	648.7	622.5	596.9	574.3	550.8	532.5	519.3	509.4	502.5
38300	13.8	68.	71.0	510.	68.4	65.7	63.1	60.5	58.2	55.8	53.9	52.6	51.6	50.9
52050	7.0	100.	13.0	331.	12.5	12.0	11.5	11.1	10.7	10.2	9.9	9.6	9.4	9.3
52070	68.6	434.	91.0	1031.	87.6	84.2	80.8	77.5	74.6	71.5	69.1	67.4	66.1	65.2
52090	17.0	77.	41.5	391.	40.0	38.4	36.9	35.3	34.0	32.6	31.5	30.7	30.2	29.7
54050	7.0	117.	5.0	115.	4.8	4.6	4.4	4.3	4.1	3.9	3.8	3.7	3.6	3.6
54070	7.5	74.	10.1	140.	9.7	9.3	9.0	8.6	8.3	7.9	7.7	7.5	7.3	7.2
54090	8.0	44.	18.0	131.	17.3	16.7	16.0	15.3	14.7	14.1	13.7	13.3	13.1	12.9

56050	5.4	85.	4.0	113.	3.9	3.7	3.6	3.4	3.3	3.1	3.0	3.0	2.9	2.9
56070	26.2	116.	22.0	177.	21.2	20.4	19.5	18.7	18.0	17.3	16.7	16.3	16.0	15.8
56090	25.5	204.	10.8	97.	10.4	10.0	9.6	9.2	8.8	8.5	8.2	8.0	7.8	7.7
58050	11.0	169.	14.0	322.	13.5	13.0	12.4	11.9	11.5	11.0	10.6	10.4	10.2	10.0
58070	52.8	611.	64.0	1305.	61.6	59.2	56.8	54.5	52.4	50.3	48.6	47.4	46.5	45.9
58090	9.0	54.	13.5	127.	13.0	12.5	12.0	11.5	11.1	10.6	10.3	10.0	9.8	9.7
59050	1.4	22.	6.0	115.	5.8	5.6	5.3	5.1	4.9	4.7	4.6	4.4	4.4	4.3
59070	1.0	26.	29.9	528.	28.8	27.7	26.6	25.5	24.5	23.5	22.7	22.1	21.7	21.4
59090	0.9	7.	4.0	43.	3.9	3.7	3.6	3.4	3.3	3.1	3.0	3.0	2.9	2.9
59390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62050	5.6	73.	6.0	115.	5.8	5.6	5.3	5.1	4.9	4.7	4.6	4.4	4.4	4.3
62070	13.0	121.	18.5	293.	17.8	17.1	16.4	15.8	15.2	14.5	14.1	13.7	13.4	13.3
62090	2.0	12.	3.5	34.	3.4	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.5
62390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64050	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64070	50.8	232.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64090	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66050	2.0	6.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66070	27.5	113.	17.2	145.	16.6	15.9	15.3	14.6	14.1	13.5	13.1	12.7	12.5	12.3
66090	1.0	3.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70050	31.0	305.	39.1	630.	37.6	36.2	34.7	33.3	32.0	30.7	29.7	29.0	28.4	28.0
70070	1854.2	12298.	1984.2	23013.	1910.5	1836.1	1762.1	1689.7	1625.5	1559.1	1507.3	1469.8	1442.0	1422.3
70090	4.5	28.	8.0	92.	7.7	7.4	7.1	6.8	6.6	6.3	6.1	5.9	5.8	5.7
70390	4.0	14.	7.0	78.	6.7	6.5	6.2	6.0	5.7	5.5	5.3	5.2	5.1	5.0
75050	23.6	240.	53.0	1120.	51.0	49.0	47.1	45.1	43.4	41.6	40.3	39.3	38.5	38.0
75070	359.8	3071.	320.8	4835.	308.9	296.9	284.9	273.2	262.8	252.1	243.7	237.6	233.1	229.9
75090	9.5	59.	13.5	143.	13.0	12.5	12.0	11.5	11.1	10.6	10.3	10.0	9.8	9.7
75390	4.0	22.	4.0	45.	3.9	3.7	3.6	3.4	3.3	3.1	3.0	3.0	2.9	2.9
76050	6.0	61.	11.5	134.	11.1	10.6	10.2	9.8	9.4	9.0	8.7	8.5	8.4	8.2
76090	6.9	38.	8.9	35.	8.6	8.2	7.9	7.6	7.3	7.0	6.8	6.6	6.5	6.4
76390	0.0	0.	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

```
77070   167.7   992.   98.2   1235.    94.6   90.9   87.2   83.6   80.4   77.2   74.6   72.7   71.4   70.4
78070     0.0     0.    0.0      0.     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
80070     0.0     0.    0.0      0.     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
81070     0.0     0.    0.0      0.     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
```

APPENDIX K

Supply/Demand Ratios, 1977 to 1986

```
BOARD 2-I

YEAR   NO OF NC STAFF-A   PROJECTED ENROLMENT-B    A/B

1977        341.000                 21861.          .015599
1978        327.889                 21055.          .015573
1979        315.329                 20279.          .015550
1980        304.439                 19693.          .015459
1981        295.199                 19109.          .015448
1982        286.671                 18502.          .015494
1983        278.719                 18190.          .015323
1984        270.920                 17850.          .015178
1985        263.458                 17350.          .015185
1986        255.811                 17300.          .014787
RANGE .000812   SIZE OF INTERVALS  0.0002   NO OF INTERVALS   5


.015787  .
         .    *
.015587  .
         .         *    *    *    *    *
.015387  .
         .                                  *
.015187  .
         .                                       *    *
.014987  .
         .
.014787  .                                                 *
         .
         .
         .    .    .    .    .    .    .    .    .    .    .
              77.  78.  79.  80.  81.  82.  83.  84.  85.  86.
```

```
BOARD 3-T

YEAR   NO OF NC STAFF-A   PROJECTED ENROLMENT-B    A/B

1977        253.000                 15695.         .016120

1978        238.037                 15247.         .015612

1979        225.976                 14779.         .015290

1980        214.862                 14411.         .014910

1981        204.625                 14088.         .014525

1982        194.140                 13699.         .014172

1983        183.588                 13391.         .013710

1984        172.817                 13247.         .013046

1985        162.698                 13167.         .012357

1986        152.804                 13105.         .011660

RANGE .004460   SIZE OF INTERVALS  0.0002   NO OF INTERVALS  23
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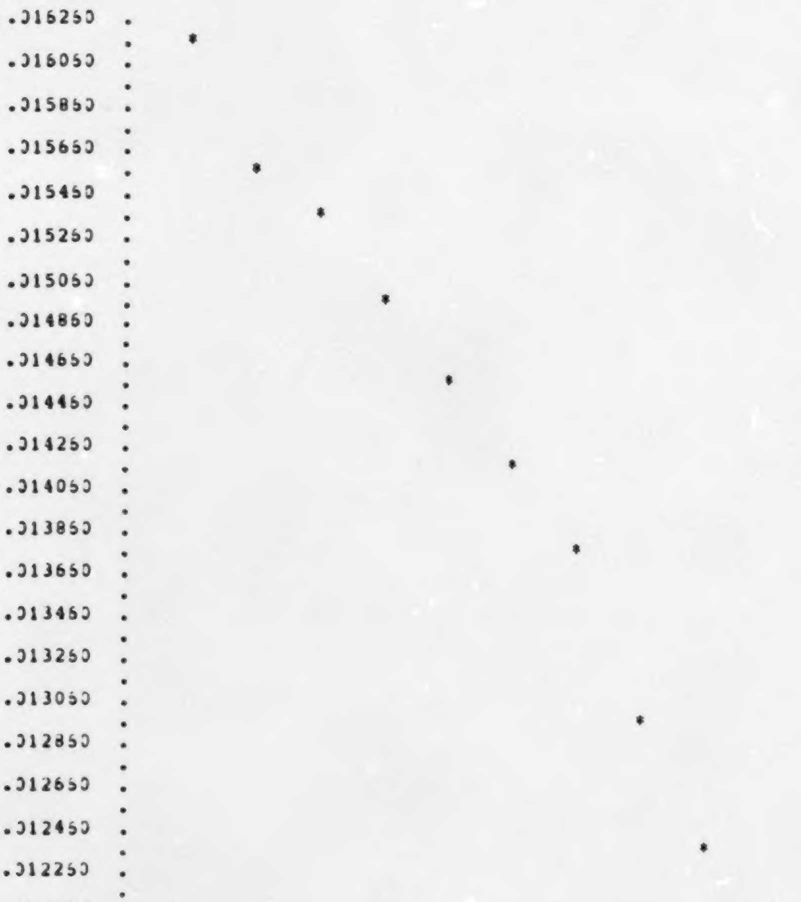

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BOARD 4-T

YEAR  NO OF NC STAFF-A  PROJECTED ENROLMENT-B   A/B

1977       526.000              26517.        .019836

1978       506.156              25379.        .019944

1979       490.737              24154.        .020317

1980       477.069              22949.        .020788

1981       464.226              21746.        .021348

1982       451.414              20840.        .021661

1983       438.882              20142.        .021789

1984       425.061              19778.        .021492

1985       410.896              19676.        .020883

1986       396.331              19698.        .020120

RANGE .001953   SIZE OF INTERVALS  0.0002   NO OF INTERVALS  10
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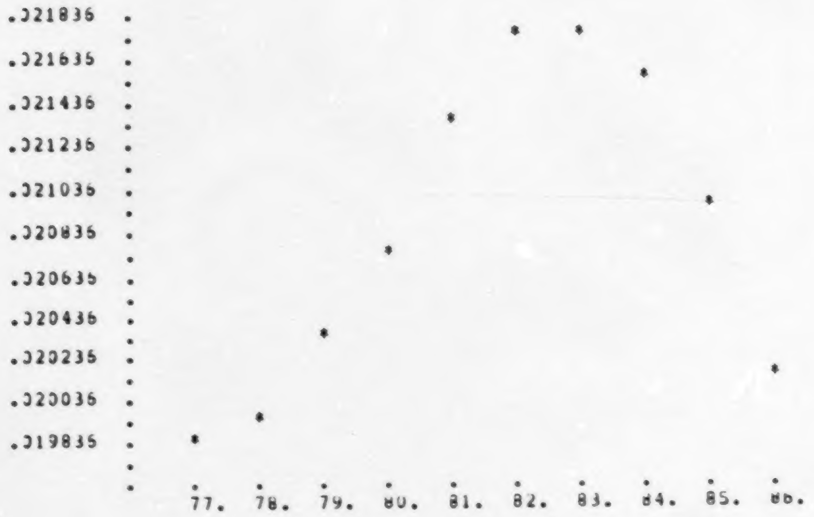

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BOARD 5-T

YEAR  NO OF NC STAFF-A  PROJECTED ENROLMENT-B   A/B

1977       191.000                18866.        .010124

1978       171.016                18649.        .009170

1979       157.844                18496.        .008534

1980       146.575                18238.        .008037

1981       136.661                18019.        .007584

1982       128.723                17865.        .007205

1983       121.638                17682.        .006879

1984       114.758                17641.        .006505

1985       108.390                17604.        .006157

1986       102.597                17655.        .005811

RANGE .004313   SIZE OF INTERVALS  0.0002   NO OF INTERVALS  22
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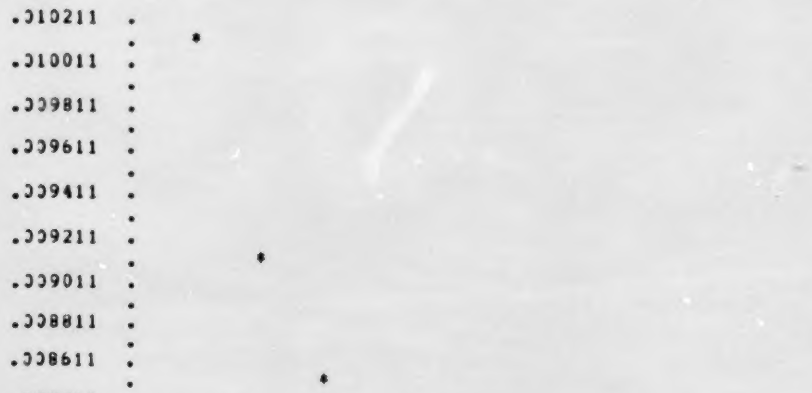

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BOARD 7-T

YEAR  NO OF NC STAFF-A  PROJECTED ENROLMENT-B   A/B

1977         41.000              3620.        .011326

1978         38.755              3484.        .011124

1979         37.621              3370.        .011164

1980         36.830              3246.        .011346

1981         36.052              3124.        .011540

1982         34.909              3043.        .011472

1983         33.505              2977.        .011255

1984         32.058              2933.        .010930

1985         30.566              2922.        .010461

1986         28.911              2884.        .010025

RANGE .001516   SIZE OF INTERVALS  0.0002   NO OF INTERVALS   8




.011625   .
          .                        *    *
.011425   .
          .   *              *              *
.011225   .
          .        *    *
.011025   .
          .                                      *
.010825   .
          .
.010625   .
          .                                           *
.010425   .
          .
.010225   .
          .
.010025   .                                                *
          .
          .   .    .    .    .    .    .    .    .    .    .
               77.  78.  79.  80.  81.  82.  83.  84.  85.  86.
```

300

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BOARD B-I

YEAR  NO OF NC STAFF-A  PROJECTED ENROLMENT-B   A/B

1977       227.000               16111.        .014090

1978       219.349               15569.        .014089

1979       213.612               14985.        .014255

1980       208.478               14308.        .014571

1981       203.778               13515.        .015078

1982       199.224               12839.        .015517

1983       195.069               12267.        .015902

1984       190.972               11900.        .016048

1985       186.673               11890.        .015700

1986       182.260               11987.        .015205

RANGE .001959   SIZE OF INTERVALS  0.0002   NO OF INTERVALS  10
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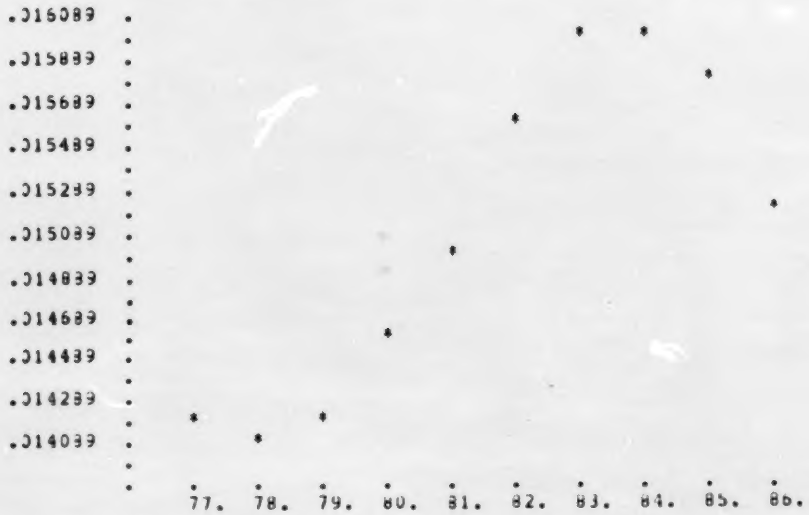

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BOARD 9

YEAR  NO OF NC STAFF-A  PROJECTED ENROLMENT-B   A/B

1977        22.000               1511.        .014560

1978        21.601               1485.        .014546

1979        21.103               1440.        .014655

1980        20.442               1440.        .014196

1981        19.494               1425.        .013680

1982        18.634               1415.        .013169

1983        17.786               1415.        .012570

1984        16.833               1405.        .011981

1985        16.093               1400.        .011495

1986        15.546               1400.        .011104

RANGE .003551   SIZE OF INTERVALS  0.0002   NO OF INTERVALS  18
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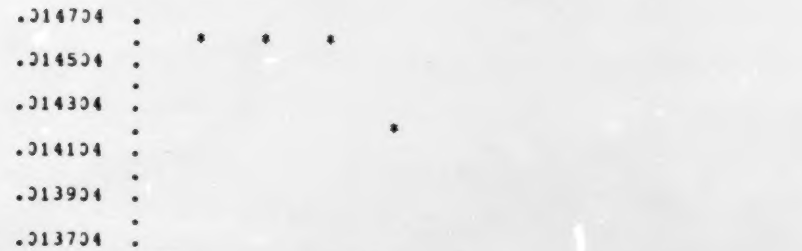

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BOARD 10

YEAR  NO OF NC STAFF-A  PROJECTED ENROLMENT-B   A/B

1977       253.000               21453.          .011793

1978       238.928               20480.          .011666

1979       226.811               19637.          .011550

1980       217.280               18706.          .011616

1981       208.503               18070.          .011539

1982       200.750               17479.          .011485

1983       192.407               16958.          .011346

1984       184.610               16558.          .011149

1985       176.962               16193.          .010928

1986       169.539               15902.          .010662

RANGE .001132   SIZE OF INTERVALS  0.0002   NO OF INTERVALS   6



.011852    .
           .     *     *
.011652    .
           .                 *     *     *     *
.011452    .
           .                                         *
.011252    .
           .                                               *
.011052    .
           .                                                     *
.010852    .
           .
.010652    .                                                           *
           .
           .     .     .     .     .     .     .     .     .     .     .
                 77.   78.   79.   80.   81.   82.   83.   84.   85.   86.
```

```
BOARD 12

YEAR   NO OF NC STAFF-A   PROJECTED ENROLMENT-B    A/B

1977         39.000                   5694.        .006849

1978         36.162                   5775.        .006262

1979         34.357                   5844.        .005879

1980         32.321                   5984.        .005401

1981         30.302                   6123.        .004949

1982         28.361                   6282.        .004515

1983         26.970                   6406.        .004210

1984         25.529                   6491.        .003933

1985         24.162                   6610.        .003655

1986         22.794                   6688.        .003408

RANGE .003441    SIZE OF INTERVALS  0.0002   NO OF INTERVALS  18
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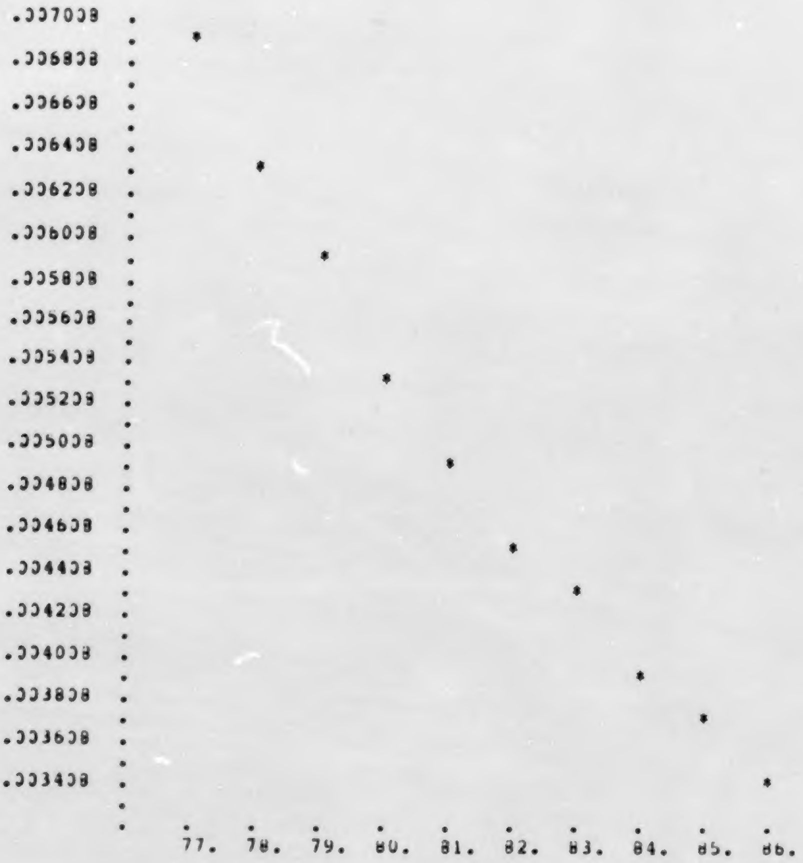

APPENDIX L

Plant Operations Budget Formula
Metro Toronto, 1978

5

PLANT OPERATIONS BUDGET FORMULA - 1978

FORMULA CALCULATION

Board ______ ______

ELEMENTARY

Prepared by ______

Date Prepared ______

A.	Total Gross Square Footage - All Buildings Excluding Portables	______ sq.ft.	X $.6505	$ ______
B.	1978 Enrolment Factor	______	X $ 50.24	______
C.	Approved Staff Allocation Teacher Allotment September 1977	______	X $361.73	______
D.	# of manually operated Elevators requiring a full-time operator	______	X $16,077.00	______
E.	Total Gross Acreage all sites	______	X $368.43	______
F.	# of Swimming Pools	______	X $13,397.00	______
G.	# of Portables	______	X $ 937.82	______
H.	# of schools estimated Jan. 1,1978	______	X .60=........	
	# of schools estimated Sept.1,1978	______	X .40= ______	
		TOTAL ______	X$669.87	______
I.	Rental of Facilities(Actual Requirement)			______
			SUB-TOTAL	______
J.1.	1977 Actual Cost of Utilities to October 31, 1977.		______	
2.	Estimated Cost of Utilities For November & December, 1977.		______	______

TOTAL 1978 PLANT OPERATIONS BUDGET FORMULA ______

5

PLANT OPERATIONS BUDGET FORMULA - 1978

FORMULA CALCULATION

Board ____

SECONDARY

Prepared by ____

Date Prepared ____

A.	Total Gross Square Footage - All Buildings Excluding Portables	____	sq.ft.X $.8147	____
B.	1978 Enrolment Factor	____	X $56.27	____
C.	Equivalent Full-Day Night School ADE	____	X $18.76	____
D.	Approved Staff Allocation Teacher Allotment September 1977	____	X $381.82	____
E.	# of Manually Operated Elevators Requiring a Full-time Operator	____	X $16,077.00	____
F.	Total Gross Acreage all sites	____	X $ 368.43	____
G.	# of Swimming Pools	____	X $13,397.00	____
H.	# of Portables	____	X $ 937.82	____
I.	# of schools estimated Jan.1,1978	____	X $.60=	
	# of schools estimated Sept.1,1978	____	X $.40= ____	
		TOTAL	____ X$669.87	____
J.	# of Unguarded Steam Plants	____	X $13,397.00	____
K.	Rental of Facilities(Actual Requirement)			____
			SUB-TOTAL	
L.1.	1977 Actual Cost of Utilities to Oct. 31,1977		____	____
2.	Estimated Cost of Utilities for November and December, 1977		____	____

TOTAL 1978 PLANT OPERATIONS BUDGET FORMULA ____

APPENDIX M

Plant Maintenance Budget Formula
Metro Toronto, 1978

PLANT MAINTENANCE

FORMULA BUDGET - 1978

FORMULA CALCULATION

Board ______________

ELEMENTARY

Prepared By ______________

Date Prepared ______________

SUMMARY

a.	Gross Area of all buildings open September 1977 ($0.4281 per sq.ft.)	______________	sq.ft.	X $0.4281	$
a.(i)	New → Gross Area of all buildings closed and retained Sept.1977 ($0.15 per sq.ft.)	______________	sq.ft.	X $0.1500	
b.(i)	Gross Area of all buildings 20 years and older open Sept.1977 ($0.2213 per sq.ft. additional)	______________	sq.ft.	X $0.2213	
(ii)	Gross Area for all buildings 35 years and older open Sept.1977 ($0.2213 per sq.ft. additional)	______________	sq.ft.	X $0.2213	
(iii)	Increased costs of maintenance in obsolete schools due to capital restraints. Gross area of all buildings 35 yrs. and older open Sept.1977 ($0.1107 per sq.ft. additional)	______________	sq.ft.	X $0.1107	
c.	Inner City Factor - Gross Area of all buildings times "Calculated Inner City Enrolment as a Percentage of Total Board Enrolment"	______________	sq.ft.	X $0,0740	
d.	Gross Area of sites as at Sept.1977 ($738.17 per acre)	______________	acres.	X $738.17	
e.	Projected 1978 Enrolment factor ($5.16 per student)	______________	sq.ft.	X $5.16	
f.(i)	Portables-maintenance-number on site Sept.1977 ($590.53 per portable)	______________	sq.ft.	X $590.53	
g.	Air-conditioning as at Sept.1977 ($32.47 per ton)	______________	tons	X $32.47	
h.	Number of Technical, Vocational & Commercial Shops open Sept.1977 ($369.09 per shop)	______________		X $369.09	
i.	Swimming Pools open Sept.1977 ($5905.61 per pool	______________		X $5905.61	

ELEMENTARY

j.	Adventure Playgrounds with initial construction cost over $10,000 ($1290.85 each)		X $1290.85	
			(X)	$

EXTRAORDINARY

k.	Malicious damage at 11.19% of (X) above		X $0.1119	$
l.	Furniture & Equipment at $0.6107 per sq.ft. of all buildings open as at Sept.1977 (Item a above)		X $0.0107	
m.	Portables - Relocations-number on site Sept.1977 (559.30 per portable)		X $559.30	
	SUB-TOTAL EXTRAORDINARY		(Y)	$

TOTAL 1978 PLANT MAINTENANCE FORMULA BUDGET

PLANT MAINTENANCE

FORMULA BUDGET - 1978

FORMULA CALCULATION

Board ____________________

Prepared By ____________________

Date Prepared ____________________

SECONDARY

ORDINARY

a.	Gross area of all buildings open September 1977 ($0.4565 per sq.ft.)	____________	sq.ft.	X $0.4565	$
a.(i)	Gross area of all buildings closed and retained Sept. 1977 ($0.15 per sq.ft.)	____________	sq.ft.	X $0.1500	
b.(i)	Gross area of all buildings over 20 years and older open Sept. 1977 ($0.2361 per sq.ft. additional)	____________	sq.ft.	X $0.2361	
(ii)	Gross area for all buildings 35 years and older open Sept. 1977 ($0.2361 per sq.ft. additional)	____________	sq.ft.	X $0.2361	
(iii)	Increased costs of maintenance in obsolete schools due to capital restraints. Gross area of all buildings 35 years and older open Sept. 1977 ($0.1180 per sq.ft. additional)	____________	sq.ft.	X $0.1180	
c.(ii)	Concentrated Use Factor - Gross area of all buildings times "Calculated Inner City Enrolment as a Percentage of Total Board Enrolment"	____________	sq.ft.	X $0.0786	
d.	Gross area of sites as at Sept. 1977 ($787.18 per acre)	____________	acres	X $787.18	
e.	Projected 1978 Enrolment factor ($5.53 per student)	____________		X $ 5.53	
f.(i)	Portables-maintenance-number on site Sept. 1977 ($634.07)	____________		X $634.07	
g.	Air-conditioning Sept. 1977 ($34.64 per ton)	____________	tons	X $ 34.64	
h.	Number of Technical, Vocational & Commercial Shops open Sept. 1977 ($393.58 per shop)	____________		X $393.58	
i.	Swimming Pools open Sept.1977 ($6297.40 per pool)	____________		X $6297.40	

SECONDARY

j.	Permanent Stadia ($1304.61 each)		X $1304.61	
	SUB TOTAL ORDINARY		(X)	$

EXTRAORDINARY

k.	Malicious damage at 13.66% of (X) above		X $0.1366	$
l.	Furniture & Equipment at $0.0127 per sq.ft. of all buildings open as at Sept. 1977 (Item a above)		X $0.0127	
m.	Portables - Relocation-number on site Sept. 1977 ($683.43 per portable)		X $683.43	
	SUB TOTAL EXTRAORDINARY		(Y)	$

TOTAL 1978 PLANT MAINTENANCE FORMULA BUDGET $

APPENDIX N

Computer Programs and Data Files

Available in microfiche version of report available from ONTERIS, Ministry of Education, Ontario